U.S. General Services Administration

GSA Carbon Footprint Tool
User Guide

Last Updated September 19, 2012

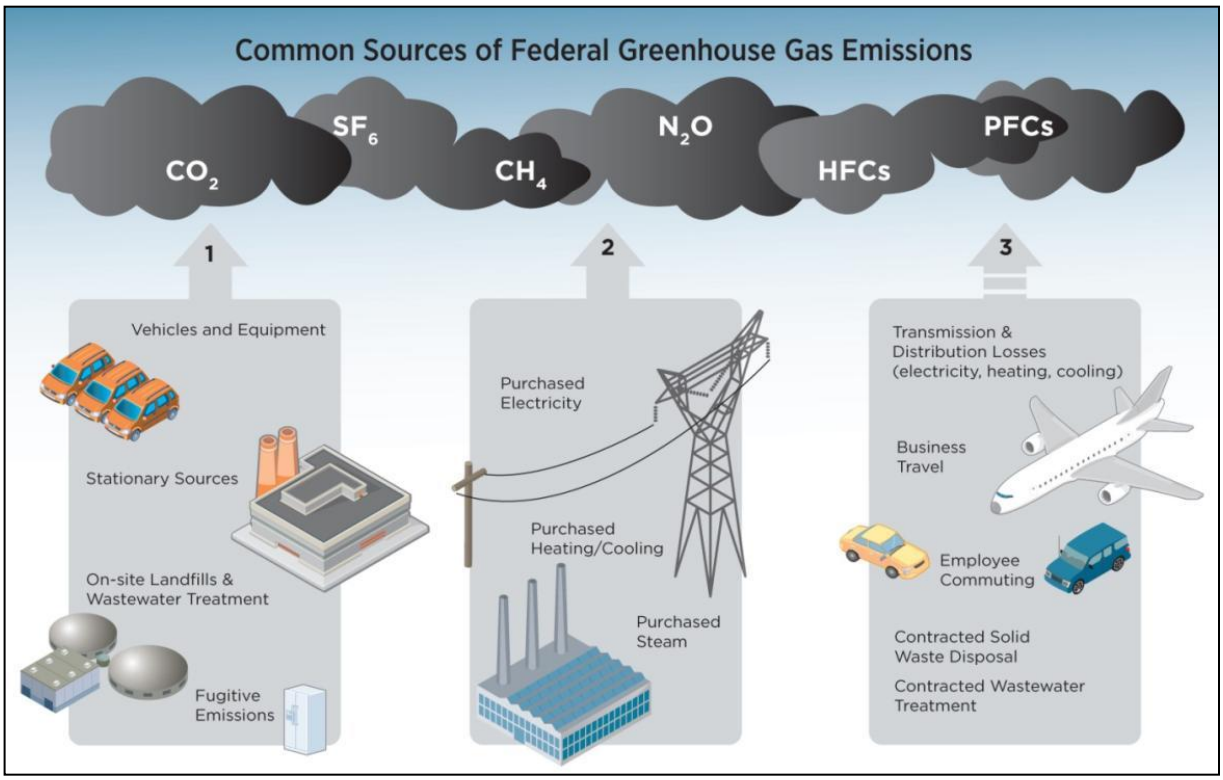
Contents

Introduction

The General Services Administration (GSA) developed the Carbon Footprint Tool (Tool) to help Federal Agencies calculate, report, and reduce their greenhouse gas (GHG) emissions from direct and indirect energy use activities as specified under Executive Order 13514.

Calculate. Calculating emissions is a multi-step process. Once you have created a profile for your Agency, the Tool facilitates a guided walk-through that allows you to determine total GHG emissions (sum of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride). As shown in the figure below, three categories of activities contribute to greenhouse gas emissions:

- Scope 1 – **Direct Emissions** from combustion of fuels in stationary sources, mobile combustion and industrial processes.
- Scope 2 – **Indirect Emissions** from purchased electricity, purchased heating/cooling and purchased steam
- Scope 3 – **Indirect Emissions** from sources not covered in Scope 2 such as employee commuting, business travel, and transmissions and distribution losses

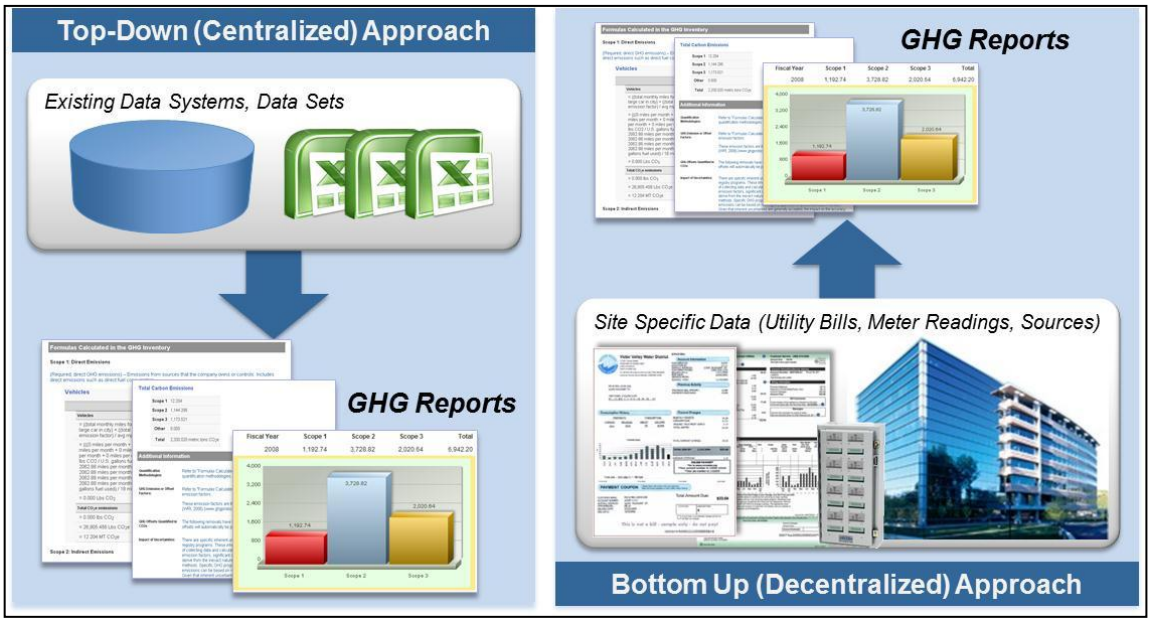


Each section of the Tool provides the necessary prompts and supporting information to help you supply the most relevant input. After your data has been entered, the Tool uses the calculation methodologies outlined in the *Federal Greenhouse Gas Accounting and Reporting Guidance* and *Technical Support Document* to ensure the GHG emissions results are complete, accurate, consistent and transparent.

Report. Reports aggregate facility-level data so that an agency-wide perspective on the source of greenhouse gas emissions can be developed. This bottom-up capability is unique to the Carbon Footprint Tool. The increased level of detail helps Agency managers identify which facilities should be prioritized for projects that will reduce the carbon footprint.

Reduce. The Tool allows you to explore multiple "what-if" operations scenarios to track progress in meeting reduction targets. Once cost-effective reduction strategies have been developed, implementation can begin towards the important, long-range goal of reducing organizational emissions.

The Carbon Footprint Tool's bottom-up GHG emissions inventory provides greater management insight & flexibility



While the Tool is designed to support a bottom-up calculation methodology, where GHG inventory data can be entered and analyzed at the building or campus level, it is also capable of importing agency-wide information from existing federal data systems. This hybrid approach allows greater streamlining and flexibility in the GHG inventory process.

Chapter 1. Get Started

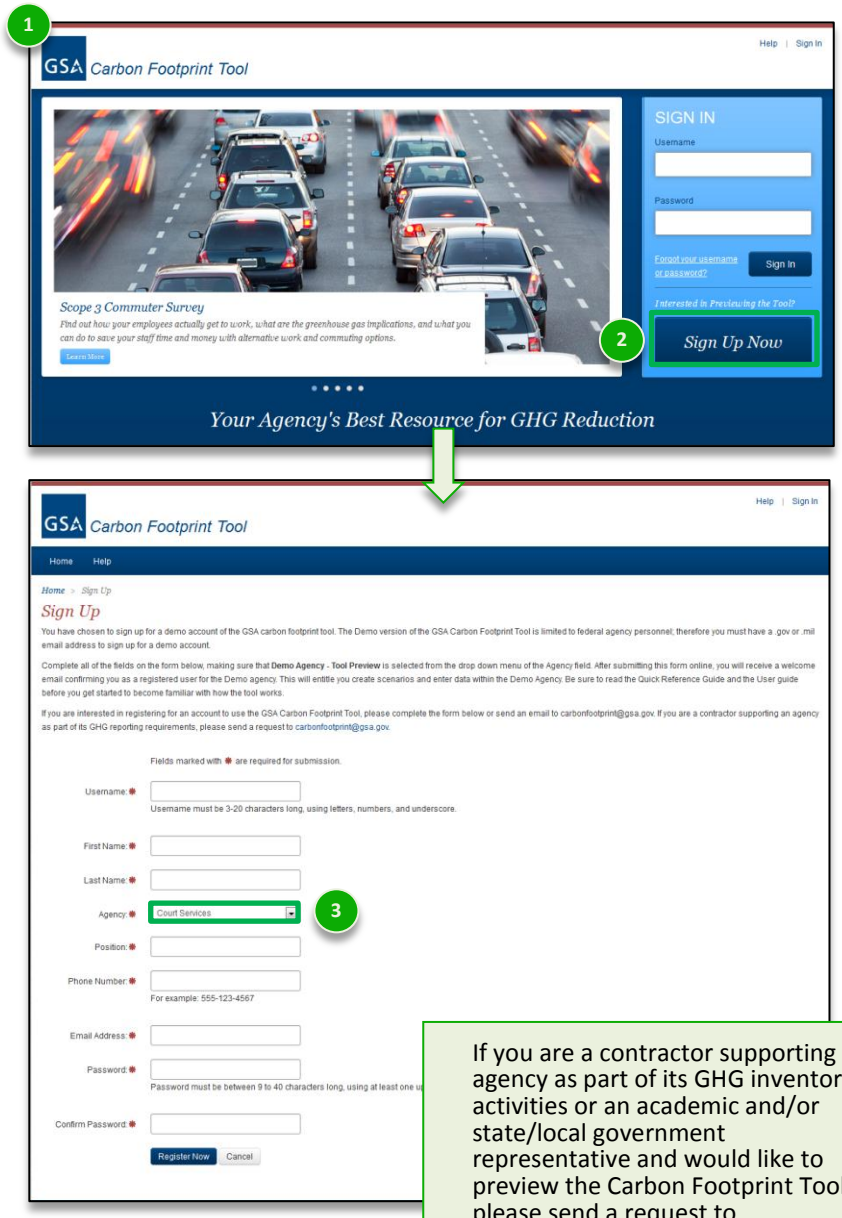
Before you can begin using the Tool, you will need to **Register** as a New User, **Sign In** to the Tool and **create "sites"** for your Agency.

Register as a New User

1. Go to the homepage - https://www.carbonfootprint.gsa.gov/ where you will be directed to the ***Sign In*** page.

2. Click the "Sign Up Now" button on the right-hand side of the ***Sign In*** page. You will be redirected to the ***Registration Form*** page.

3. Click the "Agency" drop down list to see if the name of your agency appears. If the name of your Agency does not appear, select "Demo Agency - Tool Preview". Complete all other required fields in the Registration Form, and then click the **Register Now** button to complete the registration process.



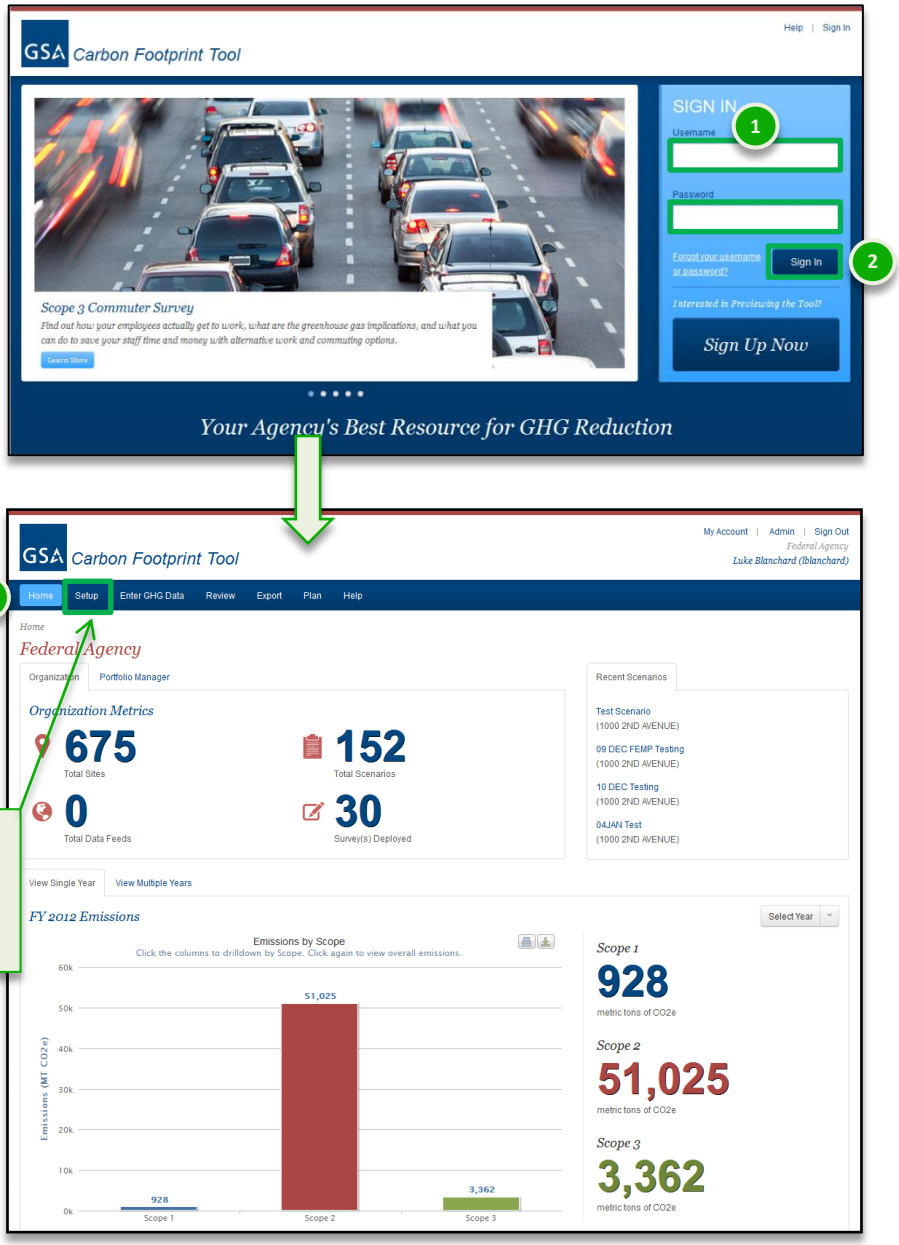
If you are a contractor supporting an agency as part of its GHG inventory activities or an academic and/or state/local government representative and would like to preview the Carbon Footprint Tool, please send a request to carbonfootprint@gsa.gov.

Sign In

1. The Carbon Footprint Tool homepage now has the **Sign In** section in the upper right-hand corner. This is where you can enter your "username" and "password". Click the **Sign In** button to enter your information.

2. If you enter your sign-in information incorrectly, you will see a red error message "Invalid Username or Password. Please try again." You will need to re-enter your correct username and password and click the "Sign In" button again. If the problem persists, click the "Forgot Username or Password?" link and submit your e-mail address.

3. The ***Home*** page first appears after you sign in.



The **Setup** section of the navigation bar, at the top of the **Home Page** contains hyperlinks that you can use to update your agency's profile, sites, and site groups.

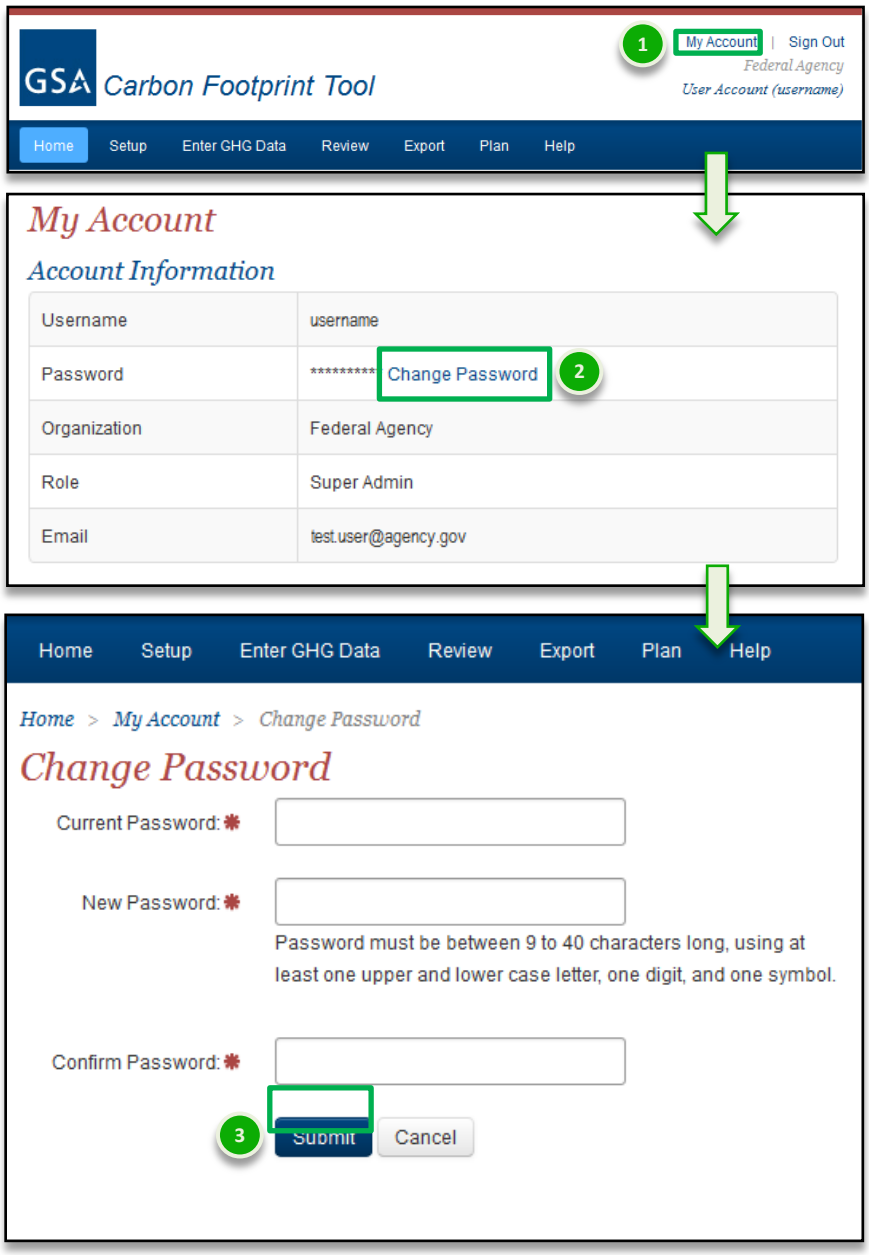
Change Password

1. **After you have signed in**, click the "My Account" link on the ***Home*** page. You will be redirected to the ***Update Password*** page.

2. **After you have signed in**, click the "Change Password" link on the ***My Account*** page. You will be redirected to the ***Update Password*** page.

   You will need to know your Current Password to make the update. If you have forgotten your current password, Sign Out, go to Sign In page then click the "Forgot Username or Password?" link.

3. Fill in the required fields and click **submit**.



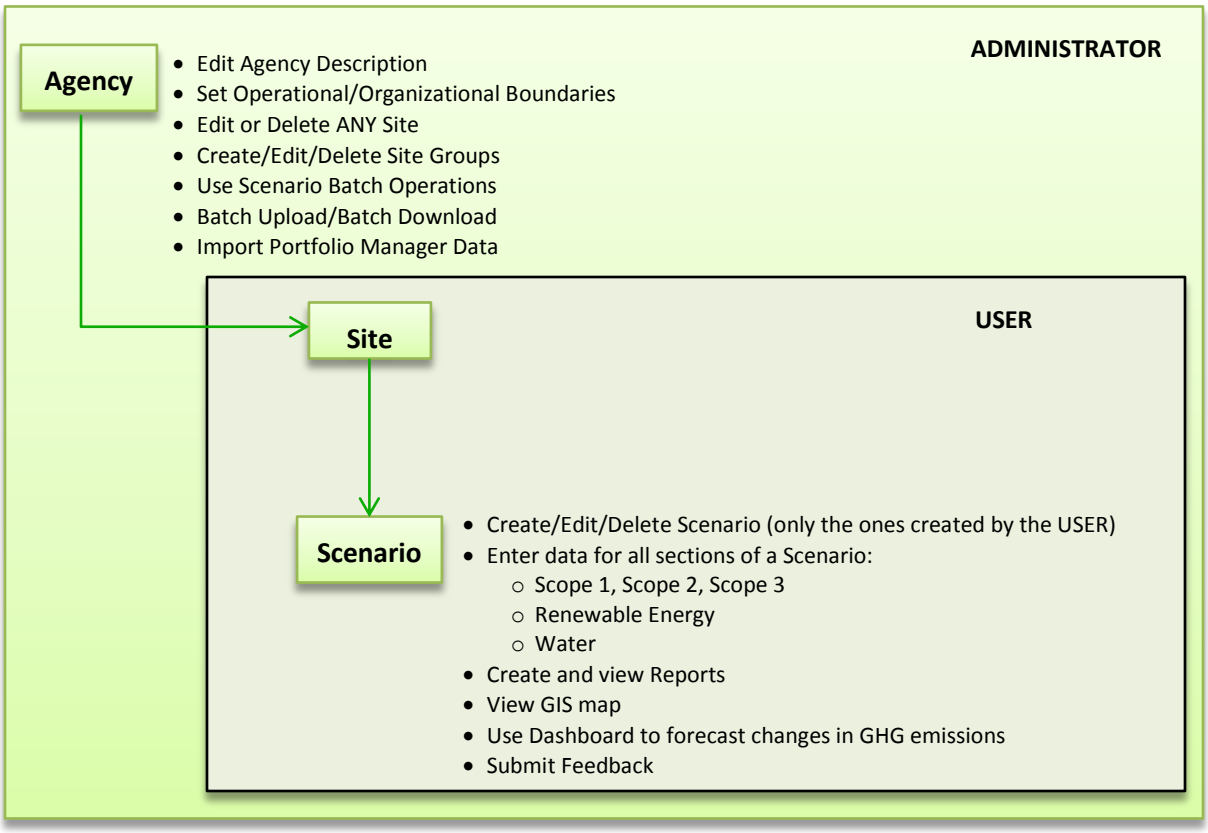
Administrator Capabilities

Carbon Footprint Tool administrators manage how **sites** are organized within the Tool as described in the previous section. They have all of the capabilities of regular agency users, plus the following:

- Edit Agency Description
- Set Operational/Organizational Boundaries
- Edit or Delete ANY Site
- Create, Edit, Delete Site Groups
- Use Scenario Batch Operations (See Chapter 2)
- Batch Upload/Batch Download
- Import Data using External Data Feeds
- Quality Analysis review for Scenarios

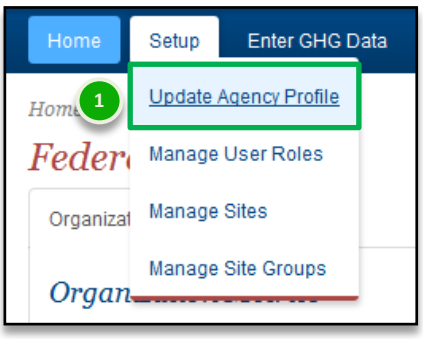
Roles & Permissions

The Carbon Footprint Tool has a three-tiered hierarchy as shown in the figure below. An agency is parent to a site and a site is parent to a scenario. Users can make edits to the Carbon Footprint Tool at the site and scenario levels only. Administrators can make changes at the agency, site and scenario levels.



Edit Agency Description

1. Click the "Update Agency Profile" hyperlink in the ***Setup*** section of the navigation bar on the **Home** page to update your site.

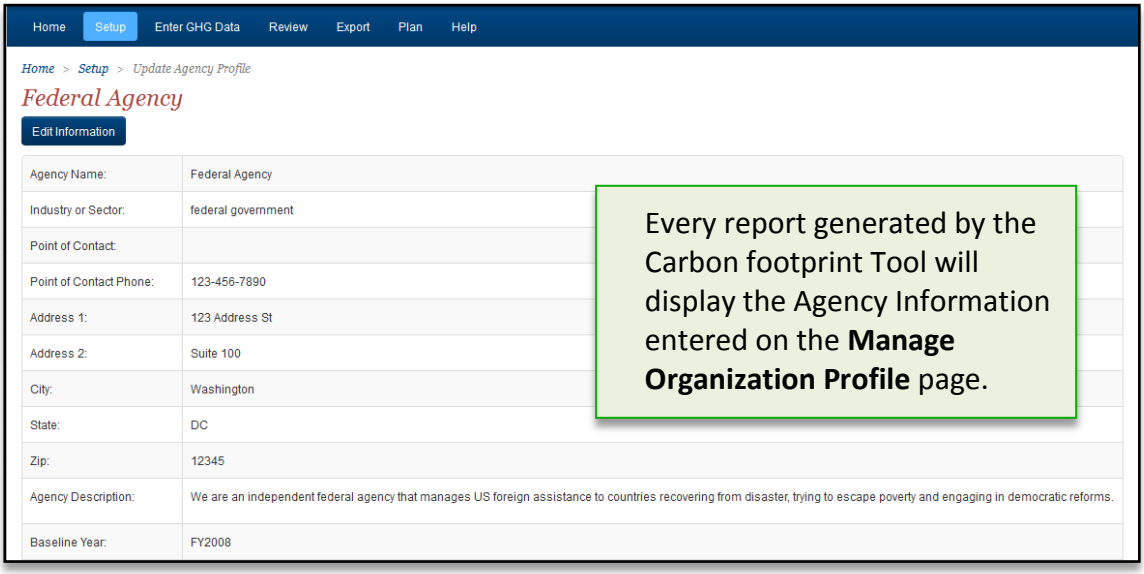


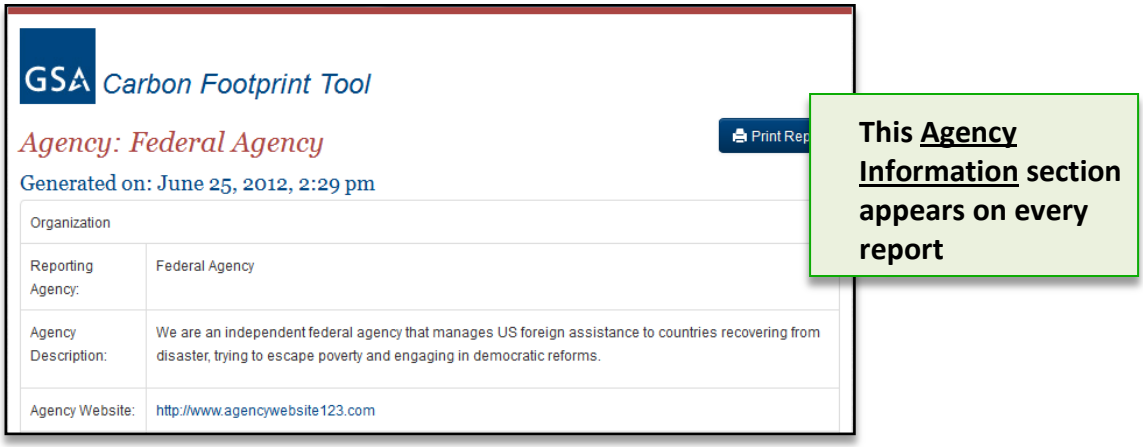
2. Click the "Edit Information" hyperlink on the **Update Agency Profile** page to update information about your Agency.

Set Boundaries

To develop agency-wide GHG inventories, agencies must establish organizational and operational accounting boundaries as described in the *Federal Greenhouse Gas Accounting and Reporting Guidance*. Organizational boundaries define the operations, facilities, and sources that an agency controls. For example, the *Guidance* describes whether the landlord or tenant is responsible for reporting emissions associated with the operation of a leased building. Once organizational boundaries are set, operational boundaries are used to categorize emissions resulting either directly or indirectly from agency activities.

The **Update Agency Profile** page in the Carbon Footprint Tool provides an input section that Agencies should use to describe organizational and operational boundaries. This information is important to include as it will show up on all agency reports as demonstrated below.





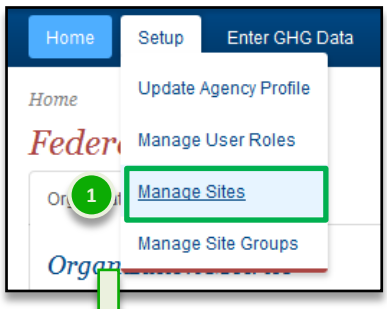
Create a New Site

The Carbon Footprint Tool represents a federal agency as an organizational unit called an *Enterprise*. An *Enterprise* is made up of **sites** which store information about the physical attributes of buildings along with the energy use activities associated with those buildings. A site can represent either an individual building or a campus of buildings that share utility meters.

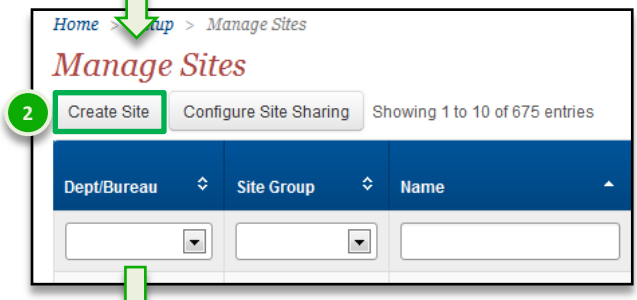
Sites are a critical component of the agency profile and must be created before GHG emissions can be calculated. Sites are created and managed from the ***Enterprise Profile*** page which appears as soon as you **Sign In**.

Create Site

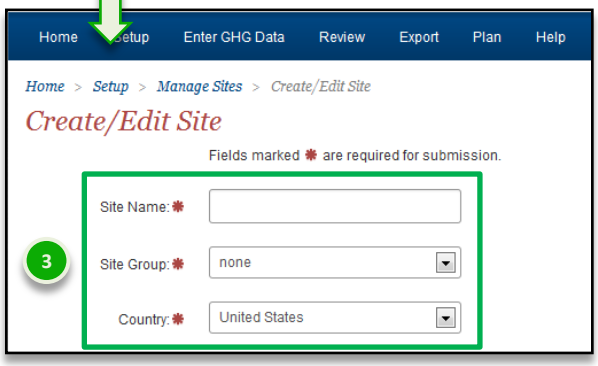
1. Click the "Manage Sites" hyperlink in the ***Setup*** section of the navigation bar to add a new site. You will be redirected to the **Manage Sites** page.



2. On the **Manage Sites** page, use the "Create Site" button to add a new site via the **Create/Edit Site** page.



3. The **Create/Edit Site** page will prompt you to enter building location, size and operating information.



Edit Site

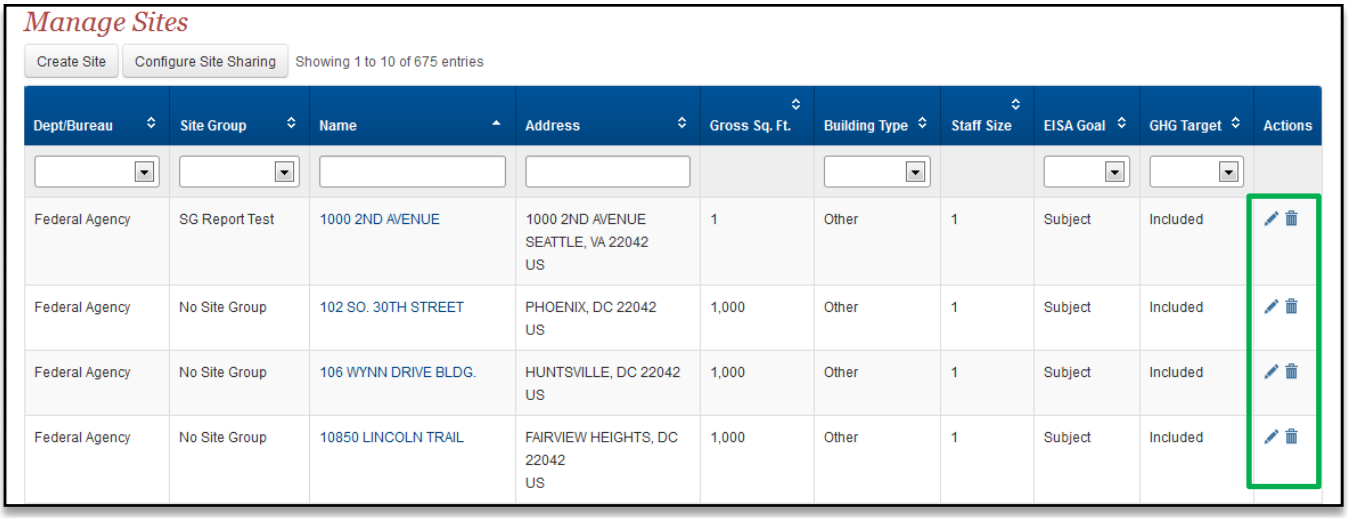
Click the **Edit Sites** icon ( ) on the ***Manage Sites*** page to edit site information.

You are only able to edit existing sites if you personally created them or if you have administrative rights. The **Edit Sites** icon will appear gray if you did not create the site of interest and you will not be able to edit the site information.

Delete Site

Click the **Delete Sites** icon ( ) on the ***Manage Sites*** page to delete a site.

You are only able to delete existing sites if you personally created them or if you have administrative rights. The **Delete Sites** icon will appear gray if you did not create the site of interest and you will not be able to edit the site information.



Manage User Roles

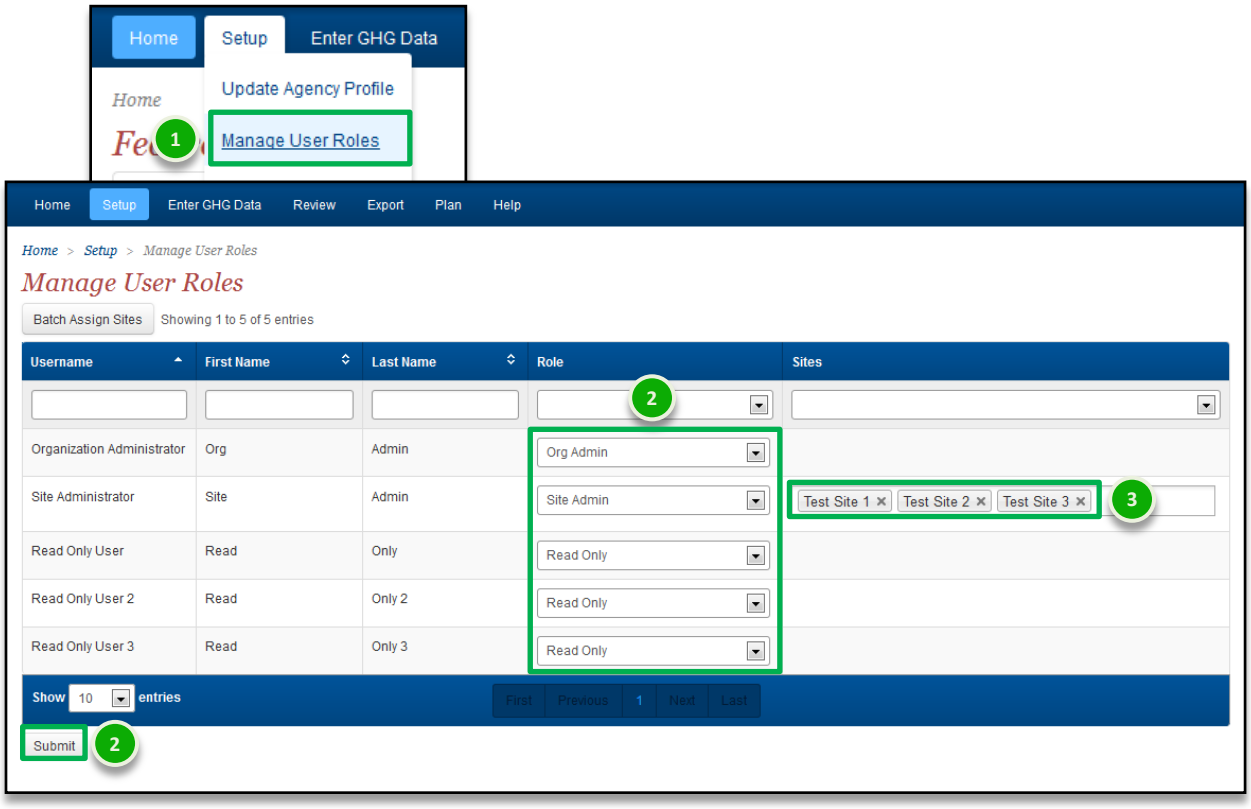
In order to give agencies as much autonomy as possible we created the Manage User Roles page. Once an agency has registered and set up an account on the Carbon Footprint Tool they can then decide to give their employees different permissions and access to different sections within the Tool.

Changing User Roles

1. Click the "Manage User Roles" hyperlink in the ***Setup*** section of the navigation bar to add a new site. You will be redirected to the **Manage User Roles** page.

2. On the **Manage User Roles** page, use the drop down menu to select the proper role for users within your agency before clicking the "submit" button. The available options are: *Org Admin*, *Site Admin*, and *Read Only*.

3. In order to give a user the role of **Site Admin** you will need to assign the sites they have permission to view and edit.



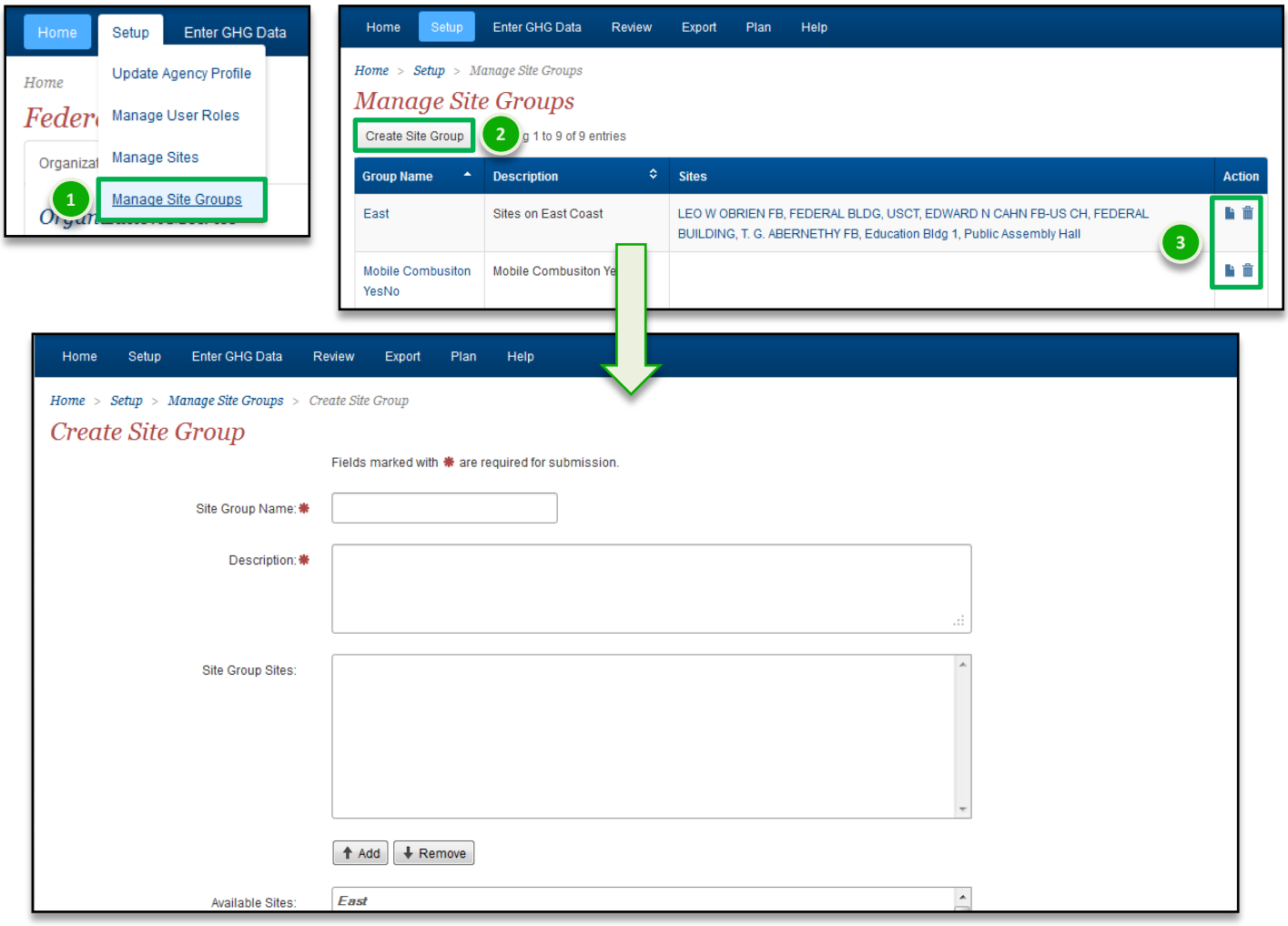
Create, Edit, Delete Site Groups

The Site Group functionality was created to allow administrators to group sites with similar characteristics for analysis and reporting. For example, a site group could represent all of the buildings within an administrative region or all of the buildings on a campus. Only administrators can create, edit or delete Site Groups.

1. Click the "Manage Site Groups" hyperlink on the ***navigation bar*** to update your site. You will be redirected to the **Manage Site Groups** page.

2. On the **Manage Site Groups** page, click the "Create Site Group" button to create a new Site Group. You will be redirected to the **Create Site Group** page.

3. Click the edit ( ) or delete ( ) buttons as appropriate to make changes to Site Groups.



Chapter 2. Calculate GHG Emissions

The Carbon Footprint Tool uses a bottom-up calculation approach to collect building-level data on direct fuel consumption, purchased electricity, business travel, commuting and other direct and indirect Agency energy-use activities. This approach allows Agencies to focus on gathering more relevant and accurate data as they develop GHG emissions estimates.

Calculating GHG emissions is a multi-step process. To use the Carbon Footprint Tool to account for all emission sources and activities within a chosen inventory boundary, you will need to do the following:

1. **Determine the number of sites** (buildings) within your inventory boundary.
2. **Add each of these sites** to the Carbon Footprint Tool (as described in the "Create Site" section in Chapter 1).
3. **Create a scenario for each site** (as described in the "Work with Scenarios" section that follows). Each scenario, an abstract representation of building operating conditions, is intended to provide a snapshot of the energy use activities associated with one building, over one year.
4. **Enter information as required** for the each section of the scenario – Scope 1, Scope 2 and Scope 3 – so that GHG emissions can be calculated.

An Agency's carbon footprint is equal to the sum of Scope 1 emissions *plus* Scope 2 emissions *plus* Scope three emissions.

The sections that follow in this chapter provide an overview of how the emissions associated with each Scope are determined.

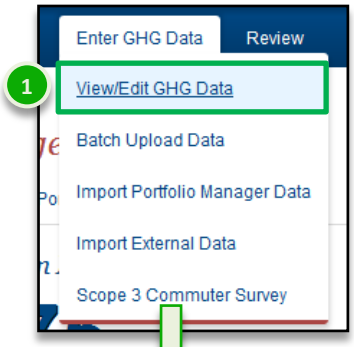
Manually Enter GHG Data

The Carbon Footprint Tool uses "scenarios" to represent building operating conditions. Scenarios provide a snapshot of the energy use activities associated with one building, over one year. You will need to create and work with scenarios to enter and use data in the Carbon Footprint Tool.

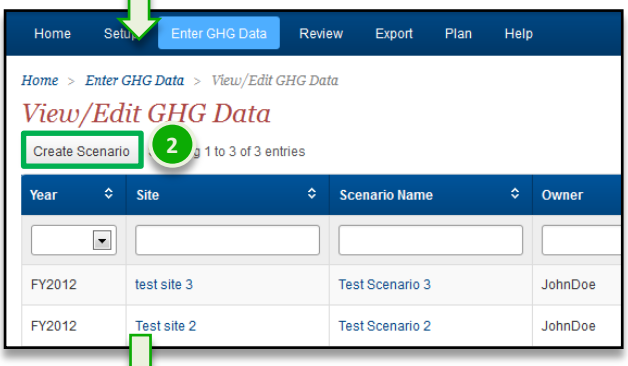
Create a New Scenario

1. Click the "Manual GHG Data Entry" hyperlink in the ***Enter GHG Data*** section of the navigation bar.

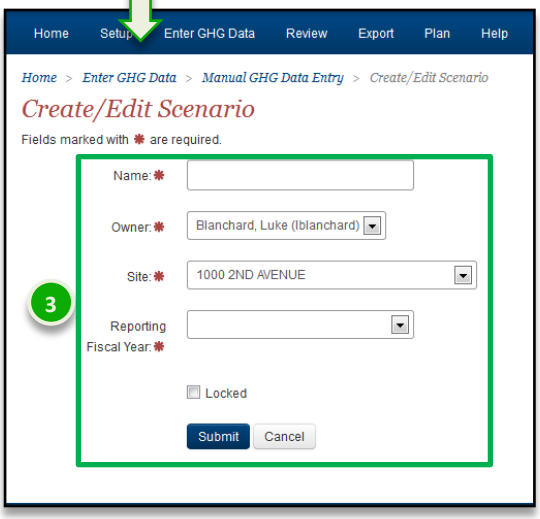
   You will be redirected to the ***Scenario List***, where the scenarios are listed in a large table that can be sorted by any of the row headings.



2. Click the "Create scenario" button under the page title. You will be directed to the ***Create/Edit Scenario*** page.



3. On the ***Create/Edit Scenario*** page, enter the Scenario Name and select a Scenario Owner, Scenario Site, and Reporting Fiscal Year from drop down menus. You will have the option to lock the scenario, preventing it from being edited at a later date without being unlocked. This functionality is intended to prevent other users from changing inputs to your scenario.



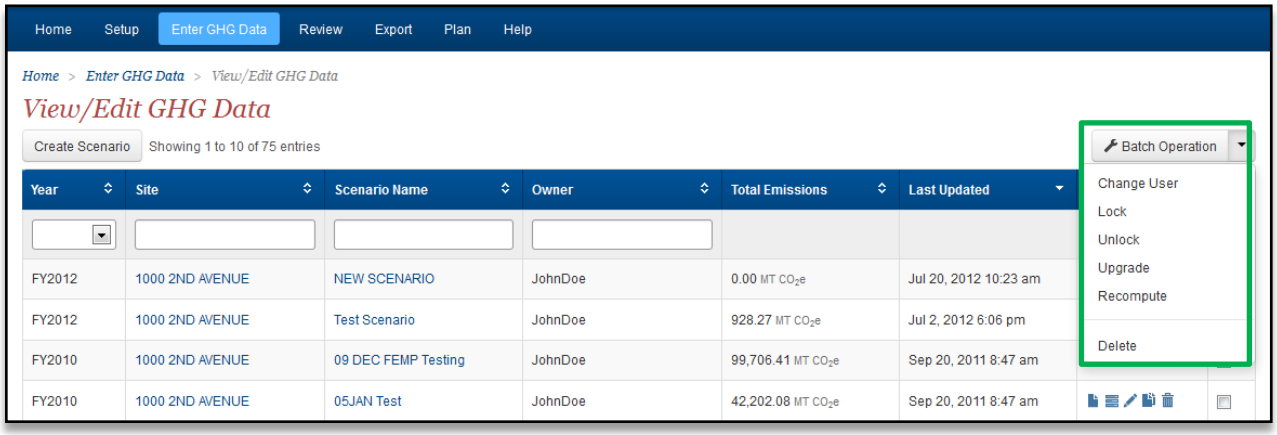
Use Scenario Shortcut Icons

The **Actions** column of the Scenario List features six icons ( ) that simplify the process of working with individual scenarios. The table below describes the functionality of each icon.

Scenario Icons	Description
( ) Scenario Report	Click to view the GHG Report for your scenario.
( ) Run Dashboard	Click to view the Enterprise Dashboard page for your scenario.
( ) Edit Scenario	Click to EDIT descriptive data (name, owner, locked/unlocked) about your scenario.
( ) Copy Scenario	Click to create a duplicate of the current scenario. This feature allow the user to model possible changes in energy usage, price fluctuations, or commuting without losing the work put in on the initial scenario.
( ) Delete Scenario	Click to delete the existing scenario. A confirmation message will appear that asks "Are you sure you want to delete this scenario?" Clicking "Ok" will permanently delete the scenario from the list of scenarios. ***All data entered into this scenario will be lost***. Clicking "No" will close the box and allow you access to the page.

Use Scenario Batch Operations

Carbon Footprint Tool Administrators can change the user assigned to a group of scenarios and upgrade, lock, unlock, and delete groups of scenarios. When logged in as an administrator, all of these operations can be accomplished by clicking the checkboxes next to the scenarios of interest, using the "Select Action" drop-down to select a desire action, and then clicking on "Go" to execute the action for all scenarios selected.



Enter Scope 1 Data

Scope 1 GHG emissions (also referred to as **direct GHG emissions**) are emissions from sources that are owned or controlled by an agency.

The following reporting categories mirror the specifications of the *Federal Greenhouse Gas Accounting and Reporting Guidance* and are available as GHG Inventory sections in the Carbon Footprint Tool:

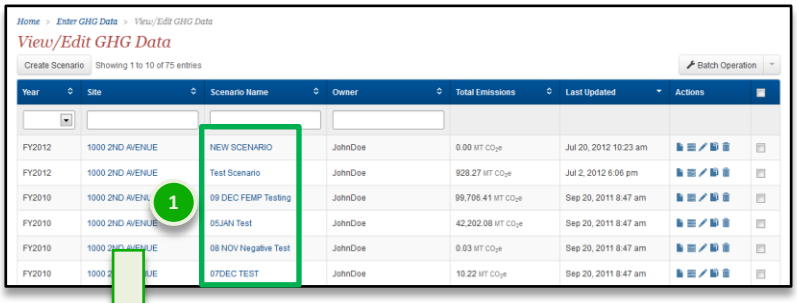
1. **Stationary Combustion: Generation of electricity, heat, cooling, or steam**: Emissions that result from combustion of fuels in stationary sources (e.g., boilers, furnaces, turbines, and emergency generators), including methane (CH_4) and nitrous oxide (N_2O) emissions from biomass combusted for production of electricity, heat, cooling, or steam.
2. **Mobile Combustion:** Emissions that result from the combustion of fuels in agency-controlled mobile combustion sources (e.g., automobiles, ships, and aircraft), including Federal fleet vehicles, such as GSA-leased, commercially leased, and agency-owned vehicles. The emissions include CH_4 and N_2O emissions from biofuel combustion.
3. **Fugitive Emissions**: The Guidance defines fugitive emissions as those that result from intentional or unintentional releases of GHGs from within the agency's organizational boundary (e.g., equipment leaks from joints, seals, packing, and gaskets; landfills and wastewater treatment plants; HFC emissions from the use of refrigeration and air conditioning equipment; methane leaks from gas transport; and SF6 emissions from leaking electrical equipment; and CH4 emissions from coal mines and venting).
4. **Process Emissions:** Emissions that result from the manufacturing or processing of chemicals and materials and from laboratory activities.
5. **Additional Emissions Sources:** Emissions of methane (CH_4), nitrous oxide (N_2O), and any other emission that doesn't fit within the four previous categories. *(Note: user defined emissions will be shown as carbon dioxide (CO_2) in the DOE FEMP Workbook download)*

To develop the Scope 1 portion of your inventory in the Carbon Footprint Tool, create your Scenario Plan then complete each section as described in the following pages.

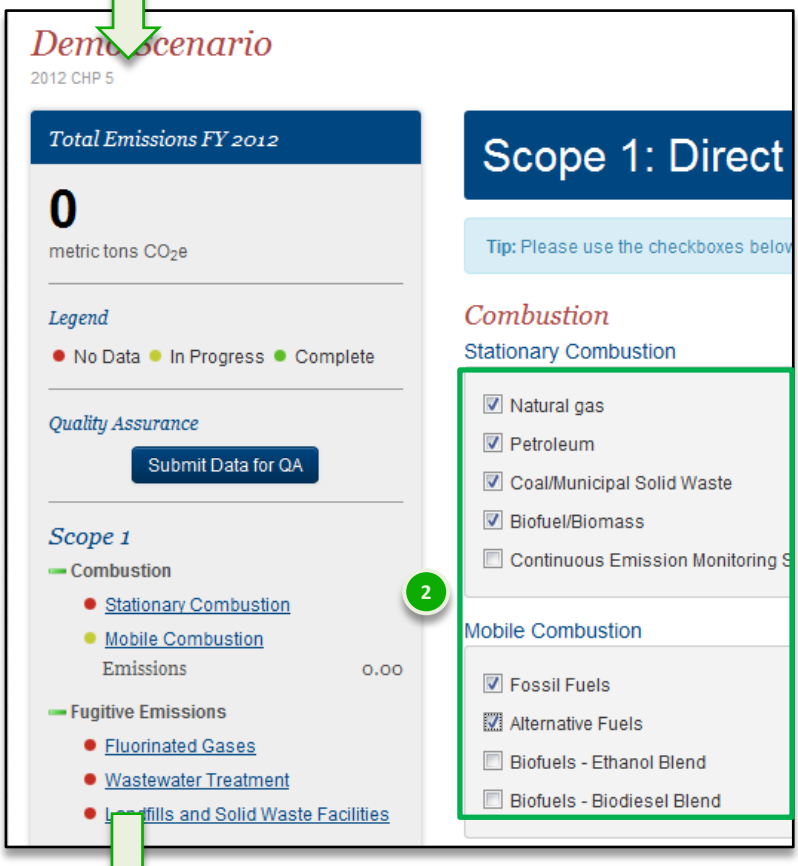
Scope 1 Scenario Plan

1. Click the hyperlinked name of the scenario of interest from the Scenario List. You will be redirected to the **Scenario Planning** page.

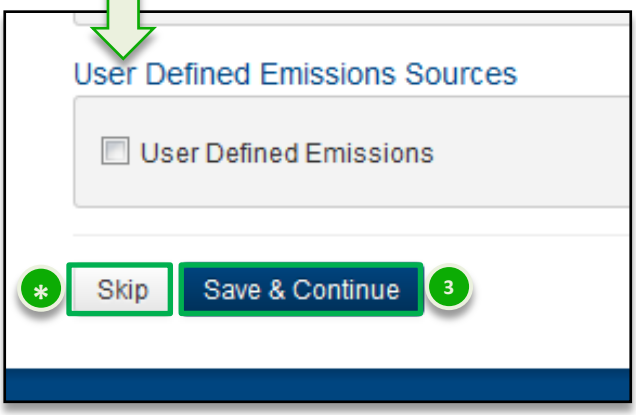
   If you accidentally click the **Site Name** instead of the Scenario Name you will be redirected to the ***Site Information*** page.



2. The **Scope 1** section of the scenario appears after you click the scenario name. Select the inventory categories (Stationary Combustion, Mobile Combustion, Fugitive Emissions, etc.) for which you wish to provide data. This means, for example, that if the building being represented in the scenario only uses natural gas for stationary combustion equipment, you would only need to select "Natural Gas". The other check boxes would be left blank.



3. Click the "Save & Continue" button at the bottom of the page to begin entering data for each Scope 1 emissions category.

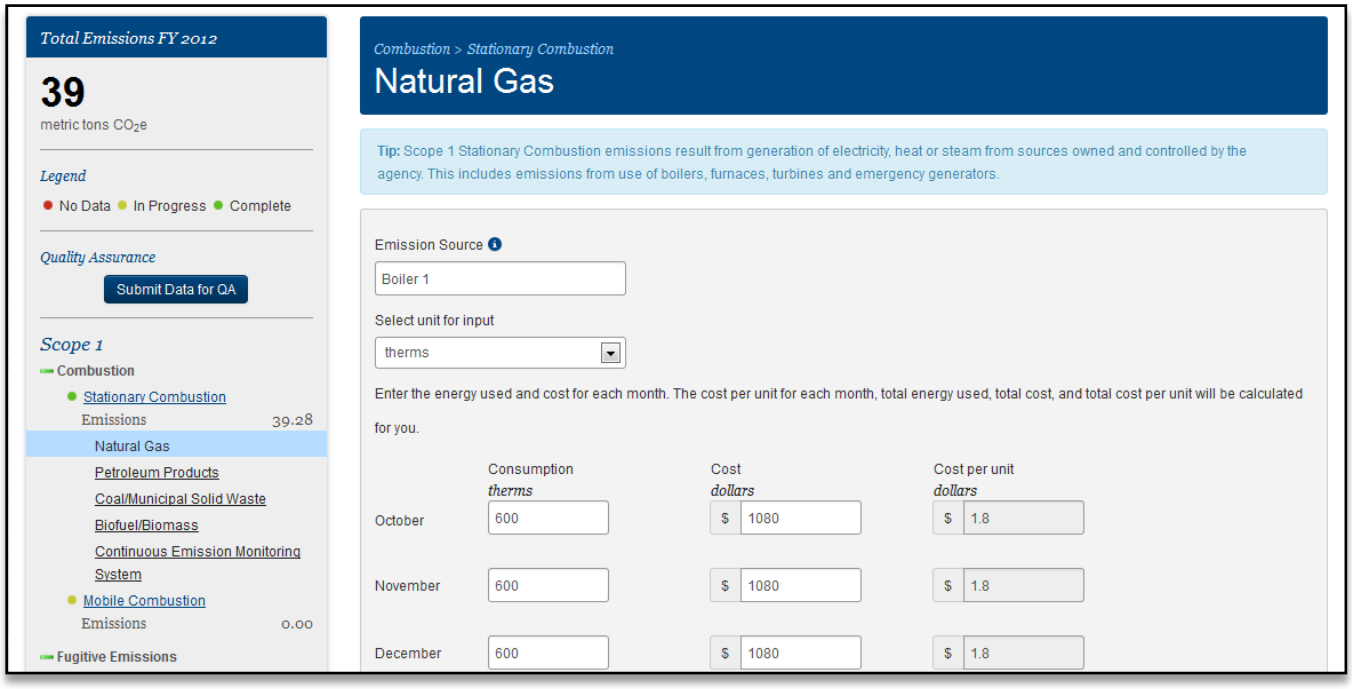


* NOTE: A "Skip" button has now been added to the analyzer which will allow you to pages and entire sections at a time.

Stationary Combustion

The stationary combustion data section allows accounting for emissions from Natural Gas, Petroleum Products, Coal/Municipal Solid Waste and Biofuels/Biomass. Once information for each stationary combustion section has been entered and the **Save & Continue** button at the bottom of the page is clicked, the Tool calculates the GHG emissions associated with the entries on each page.

The screenshot below shows the first page of the stationary combustion section. On the page, 600 therms[1] of monthly natural gas usage have been entered. After clicking the **Save & Continue** button, the carbon footprint calculated is 39 metric tons CO_2 equivalents.



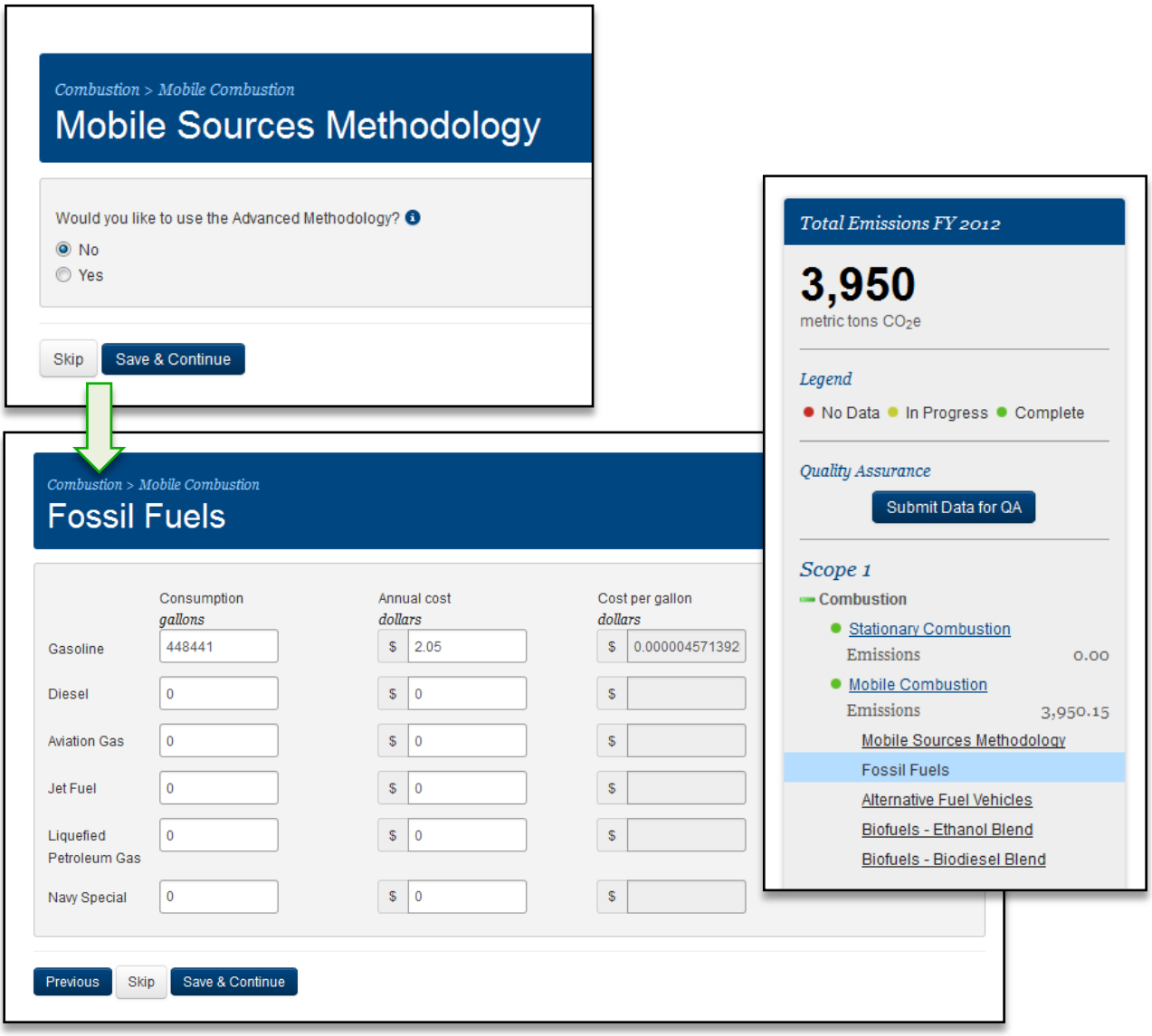
[1] Non-residential facilities averaged 599 therms per month in the District of Columbia from 2001-2008. http://www.opc-dc.gov/about/who-are-dc-consumers/404-what-is-the-average-natural-gas-usage-per-customer-in-the-district

Mobile Combustion

The mobile combustion data section allows accounting for vehicles powered by both fossil fuels and alternative fuels. Once information for each mobile combustion section has been entered and the **Save & Continue** button at the bottom of the page is clicked, the Tool calculates the GHG emissions associated with the entries on each page.

The screenshot below shows the first page of the mobile combustion section. If you only know the number of gallons of each fuel type that were consumed, select "No". If you know the number of gallons of each fuel type that were consumed, the emissions control technology used, and the number of miles driven, select "Yes."

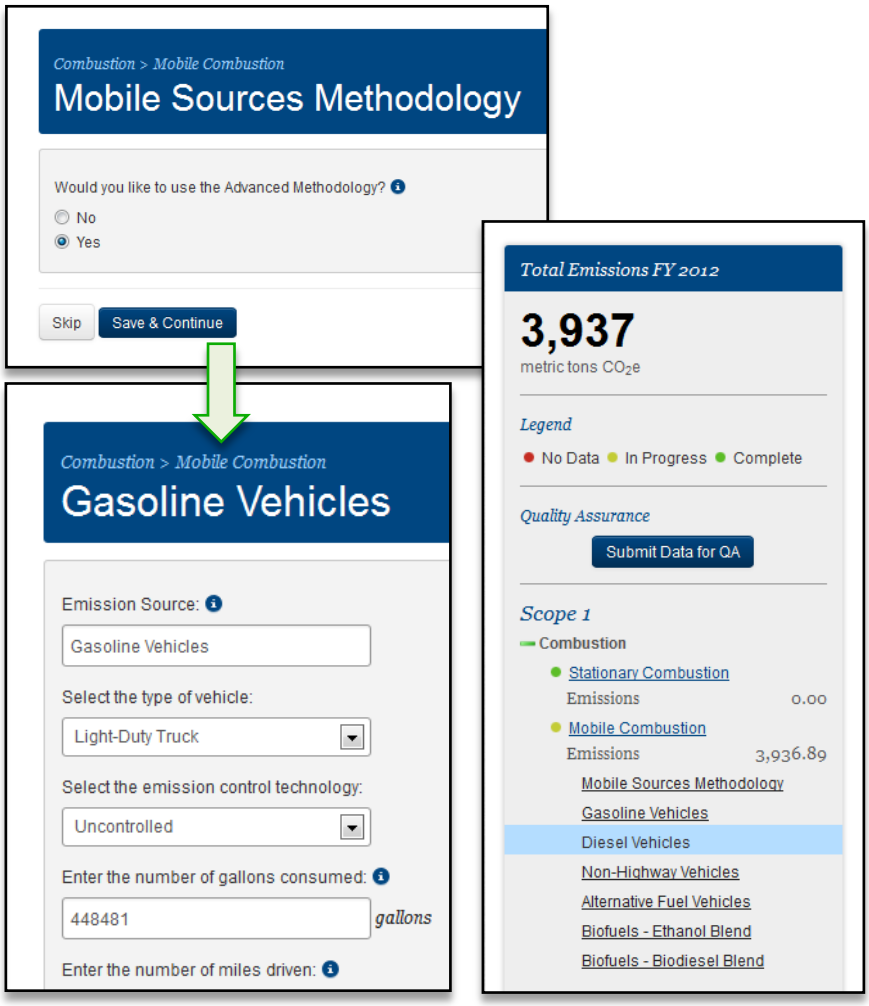
In the example that follows, after "No" is selected, 448,481 gallons[2] of annual gasoline usage and zero gallons of aviation gas, diesel, jet fuel, gasoline, liquefied petroleum gas and navy special are entered on the next page. After clicking the **Save & Continue** button, the carbon footprint uses the **default methodology** for mobile combustion emissions and calculates 3,950 metric tons CO_2 equivalents.



[2] The Federal Automotive Statistical Tool (FAST) reported 448,481 GGE of petroleum usage reported for the General Services Administration. All petroleum usage was assumed to be gasoline. For more information, visit http://www.afdc.energy.gov/afdc/data/fleets.html#consumption and view the table Petroleum Consumption by Agency.

The screenshots that follow illustrate how the same information is processed in the Tool after "Yes" is selected instead and 448,481 gallons of annual gasoline usage is again assumed and entered. Emissions are assumed to have been generated by light-duty trucks with uncontrolled emissions sources. The carbon footprint associated with the **detailed calculation methodology**, which is used after "Yes" is selected, is 3,937 metric tons CO_2 equivalents, 0.3% percent less than the carbon footprint estimated using the default methodology. This difference is expected since the default and detailed methodology use the same approach to calculate carbon dioxide (CO_2) emissions from fuel use, but differ in the way they estimate methane (CH_4) and nitrous oxide (N_2O) emissions which also contribute to the carbon footprint.

For more information about the difference in these approaches, see Appendix A in the Technical Support Document.

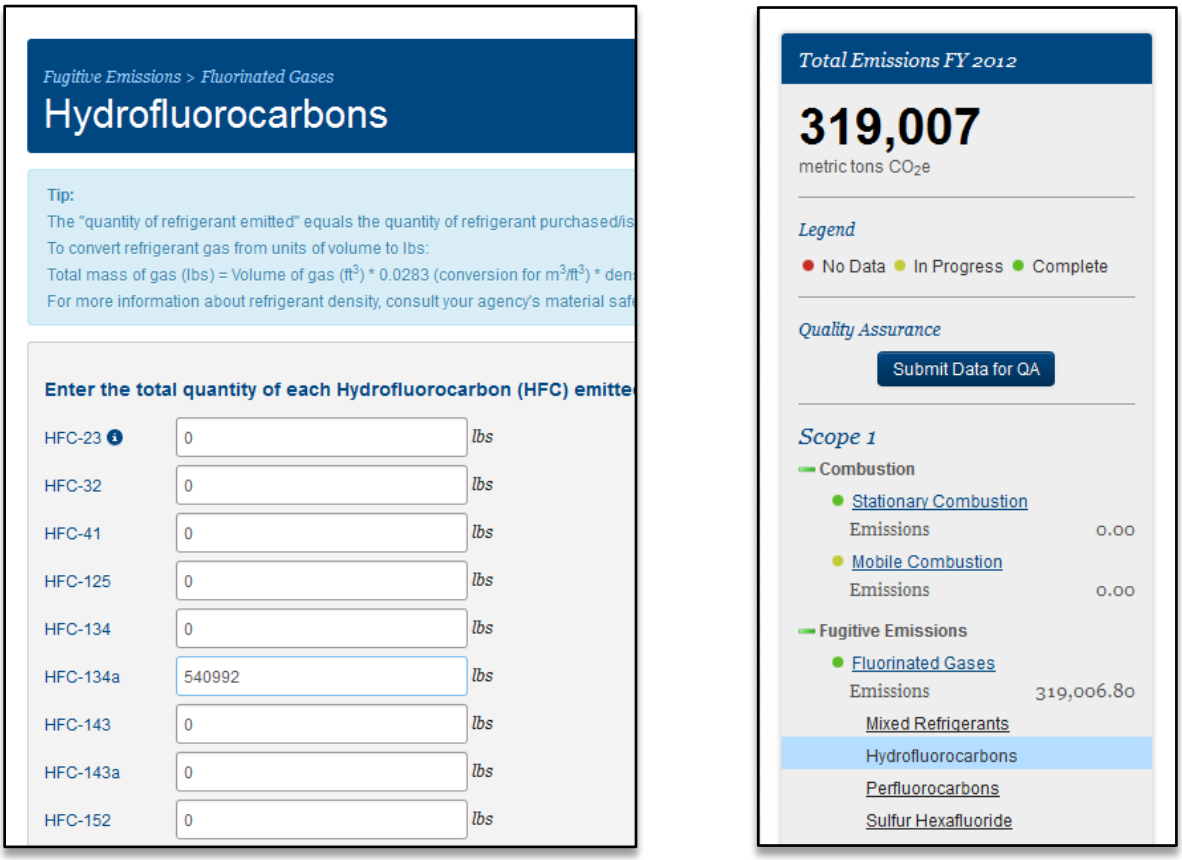


Fugitive Emissions

The fugitive emissions data section allows accounting for fugitive greenhouse gas emissions from fluorinated gasses, wastewater treatment, landfills and solid waste facilities. Once information for each fugitive emissions section has been entered and the **Save & Continue** button at the bottom of the page is clicked, the Tool calculates the GHG emissions associated with the entries on each page.

NOTE: *Wastewater treatment and landfill emissions are only considered Scope 1 emissions if your agency owns or operates the water treatment facility or landfill. For more information, see Appendix A in the Technical Support Document.*

The screenshot below shows the first page of the fugitive emissions section. On the page, 540,992 pounds[3] of annual HFC-134a emissions have been entered. After clicking the **Save & Continue** button, the carbon footprint calculated for this single entry is 319,007 metric tons CO_2 equivalents.

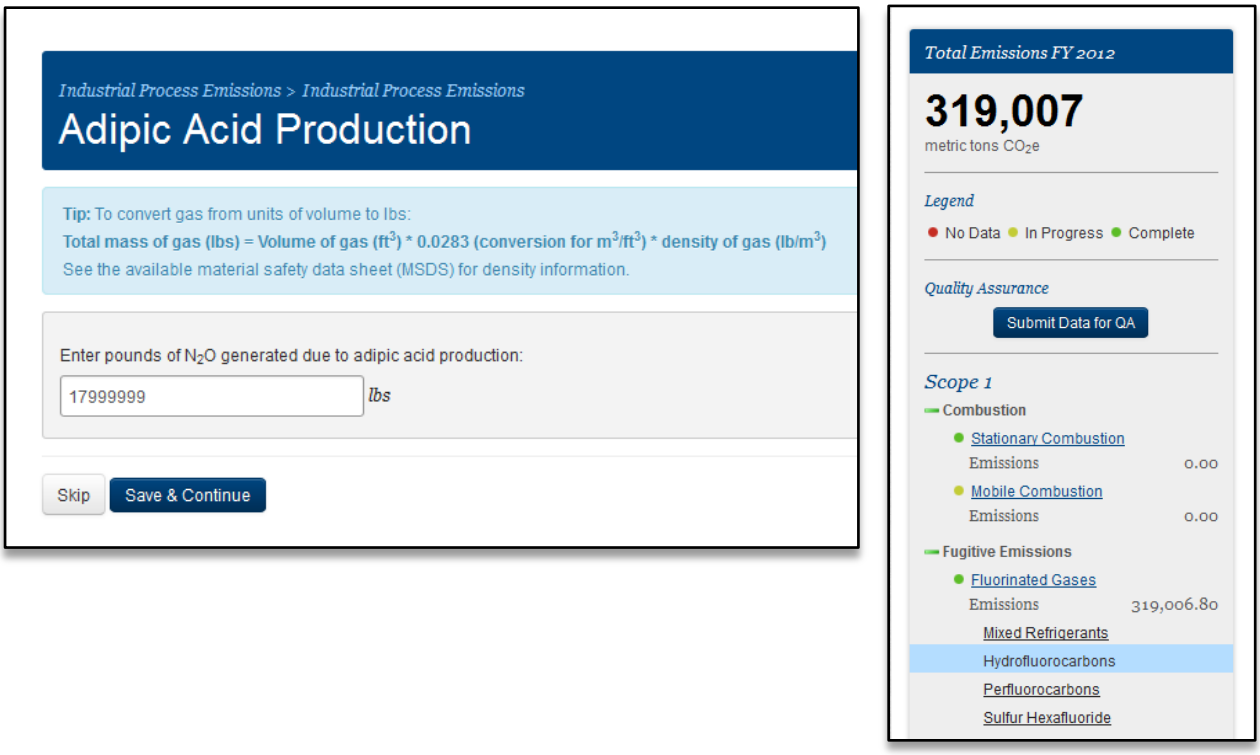


[3] This number is 1% of the TOTAL quantity of HFC-134a that was leaked from mobile air conditioning systems in 2004. According to the U.S. EPA, total mobile A/C emissions in 2004 were 24,539 metric tons or 54, 099,234 pounds. For more information, see <http://www.epa.gov/cppd/mac/Service%20Team%20Final%20Report.pdf >

Industrial Processes

Most agencies are unlikely to have industrial process emissions. However, the Tool's industrial process emissions data section allows accounting for processes ranging from adipic acid and cement production to semiconductor manufacturing. Once information for each industrial process emissions section has been entered and the **Save & Continue** button at the bottom of the page is clicked, the Tool calculates the GHG emissions associated with the entries on each page.

The screenshot below shows the first page of the industrial process emissions section. On the page, 17,999,999 pounds[4] of nitrous oxide (N_2O) emissions from adipic acid production have been entered. After clicking the **Save & Continue** button, the carbon footprint calculated for this level of nitrous oxide emissions is 2,531,045 metric tons CO_2 equivalents.



[4] This number is 1% of the estimated emissions associated with the global adipic acid production of 6,000,000, 000 pounds in 2000. According to the report N_2O Emissions from Adipic Acid and Nitric Acid Production, each tonne of adipic acid produced releases 300 kg nitrous oxide (N_2O). With the appropriate conversions, this translates to 1,799,999,855 pounds of nitrous oxide (N_2O) emissions. For more information, see < http://www.ipcc-nggip.iges.or.jp/public/gp/bgp/3_2_Adipic_Acid_Nitric_Acid_Production.pdf >

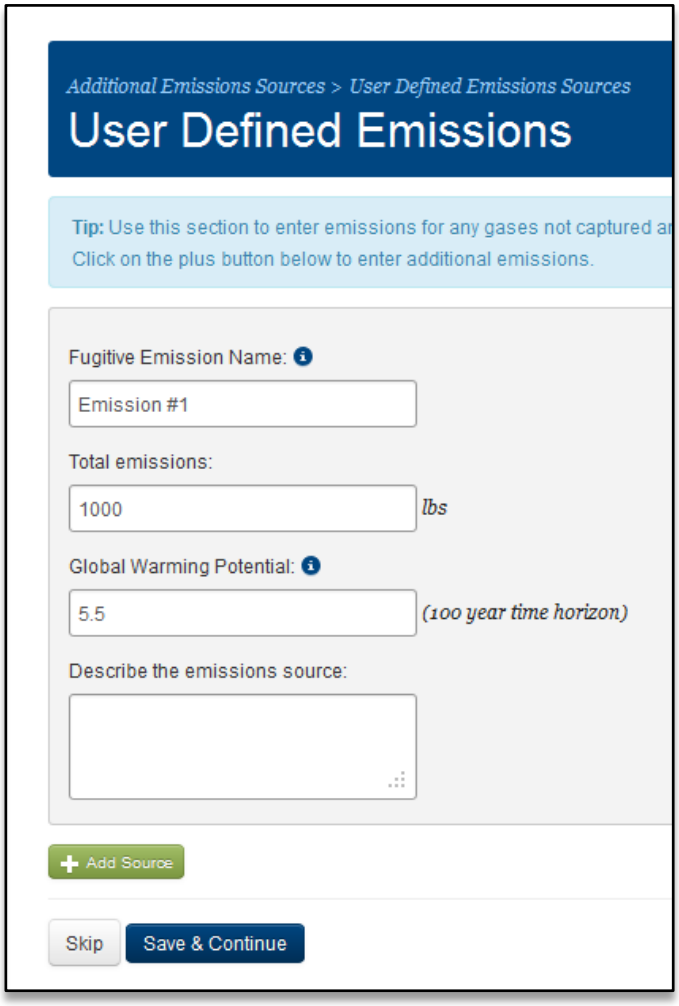
Additional Emissions Sources

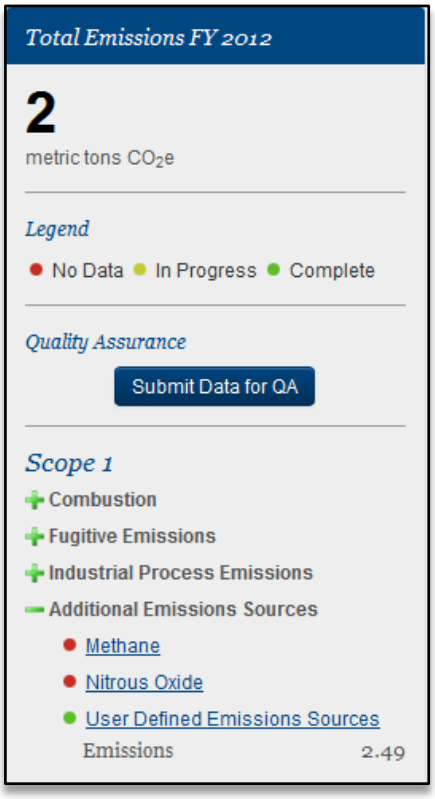
These are the methane (CH_4), Nitrous Oxide (N_2O), and other emissions that do not fit within the previously listed Scope 1 sections. The emissions would come from sources such as on site gardens, farms, compost piles, etc.

The screenshot below shows the User Defined Emissions section. This page allows you to enter any emission, the amount emitted into the atmosphere for your site, and the Global Warming Potential for that emission.

In this case, if you were to enter 1000 pounds of an emission that has a Global Warming Potential of 5.5 (with a 100 year time horizon), it would total 2.49 metric tons of CO_2 equivalents.

(Note: user defined emissions will be shown as carbon dioxide (CO_2) in the DOE FEMP Workbook download)





Enter Scope 2 Data

Scope 2 GHG emissions are the **indirect GHG emissions** generated from consumption of purchased electricity, heat or steam sources.

The following reporting categories mirror the specifications of the *Federal Greenhouse Gas Accounting and Reporting Guidance* and are available as GHG Inventory sections in the Carbon Footprint Tool:

1. purchased electricity,
2. purchased steam or hot water,
3. purchased chilled water,
4. purchased electricity, steam, or hot water from a combined heat and power facility, and
5. purchased steam from a waste-to-energy (WTE) facility.

To develop the Scope 2 portion of your inventory, create your Scenario Plan then complete each section as described in the following pages.

Scope 2 Scenario Plan

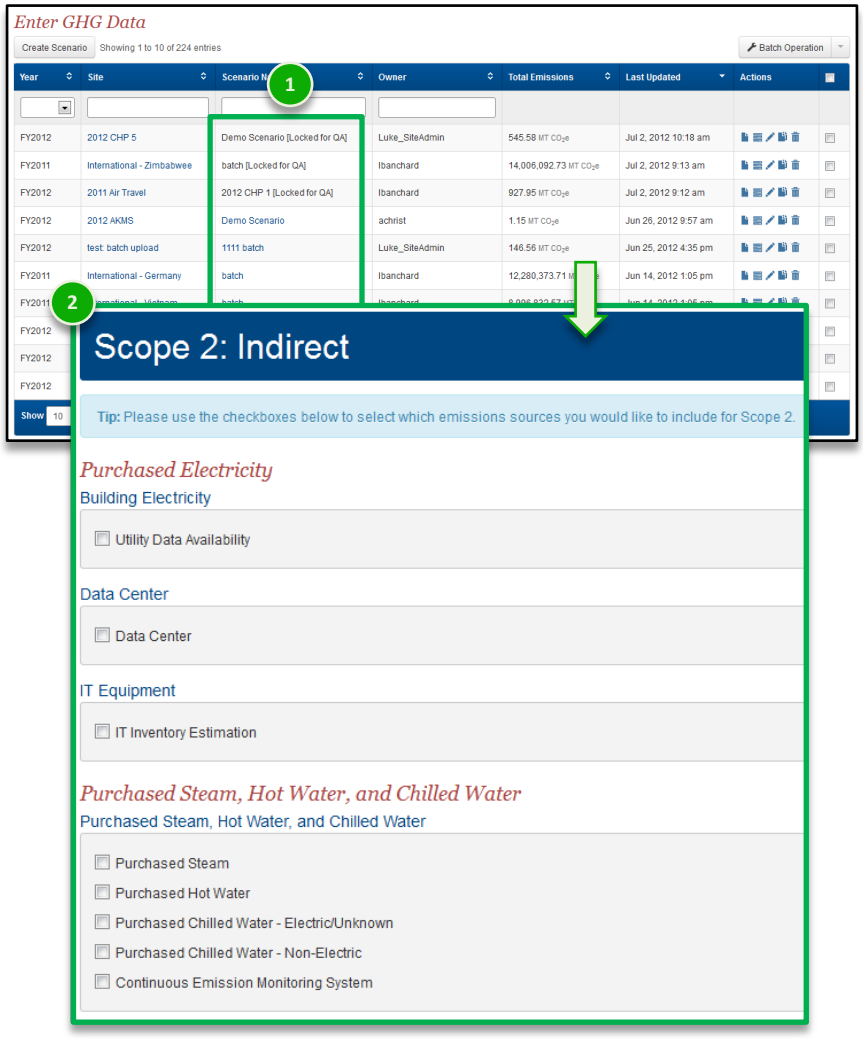
1 Click the hyperlinked name of the scenario of interest from the Scenario List. You will be redirected to the **Scenario Planning** page.

If you accidentally click the **Site Name** instead of the Scenario Name you will be redirected to the ***Site Information*** page.

2 The **Scope 1** section of the scenario appears after you click the scenario name. Click the **Scope 2** link in the left-hand navigation column.

Select the inventory categories (purchased electricity, purchased steam, purchased hot water or chilled water, purchased combined heat and power, etc.) for which you wish to provide data.

Click the "Save & Continue" button at the bottom of the page to begin entering data for each **Scope 2** emissions category.

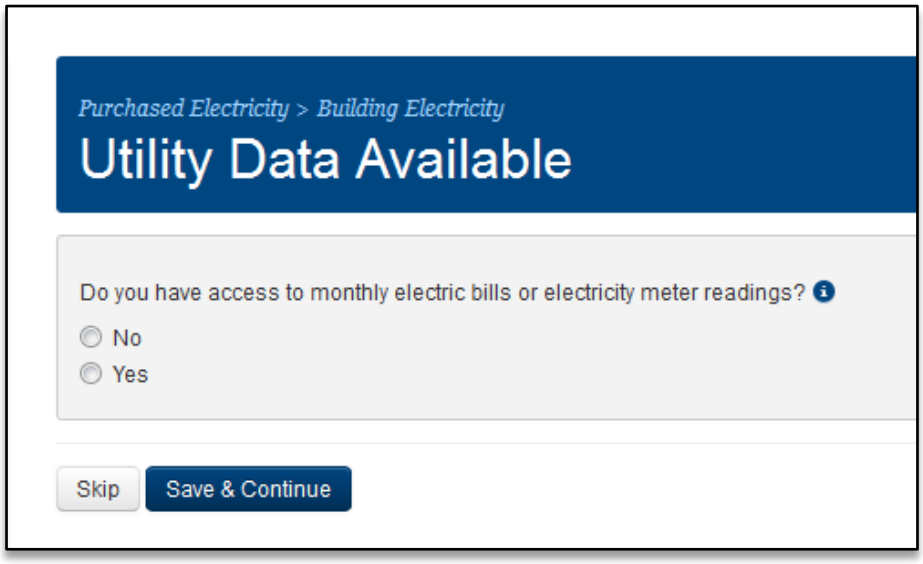


Purchased Electricity

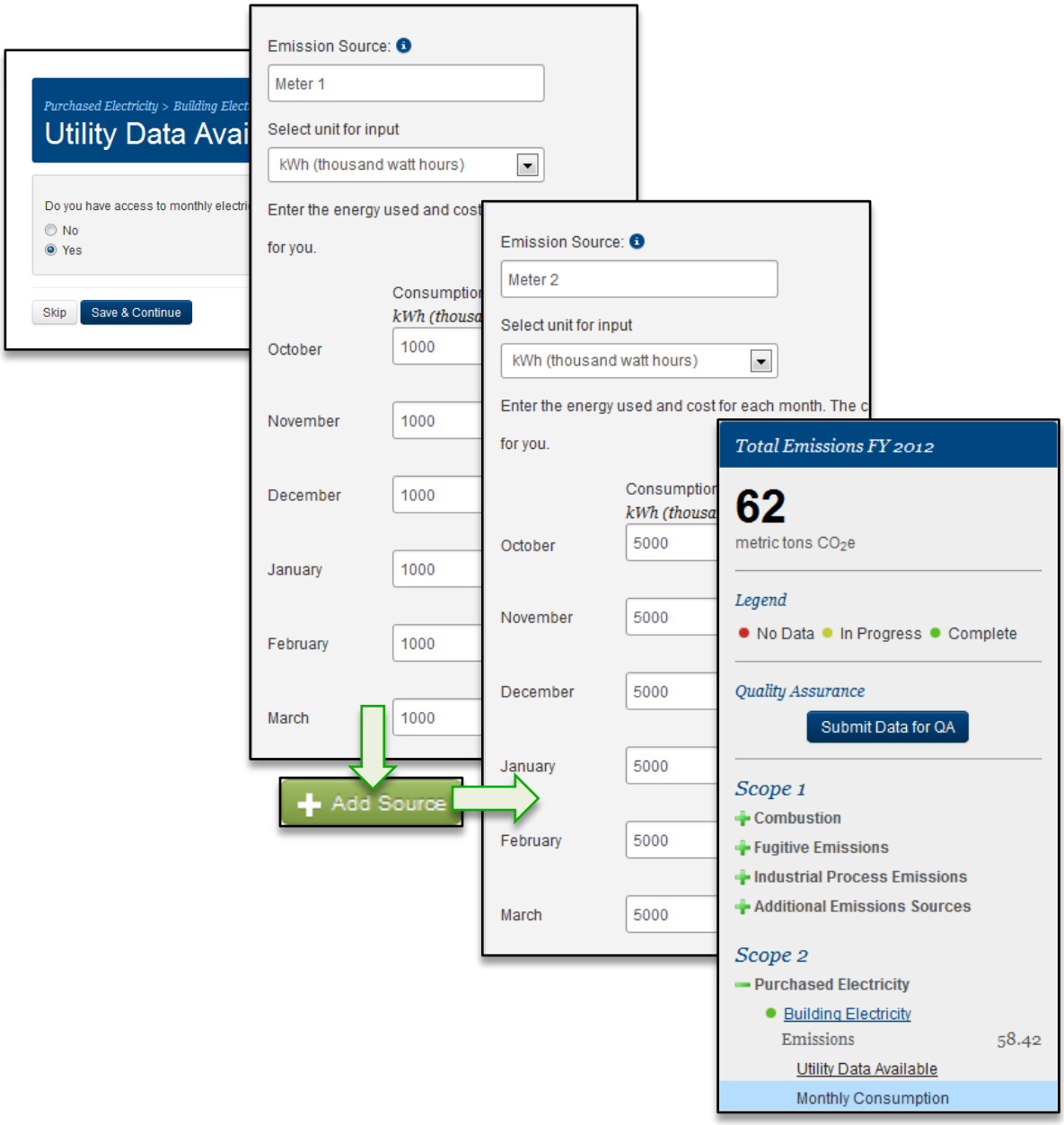
The purchased electricity data section allows accounting for greenhouse gas emissions from electricity purchased throughout the year. Emissions can be estimated using either monthly utility bills, an annual energy estimate for the entire building or the occupancy area.

NOTE: *While the Tool allows agencies to estimate consumption based on total building energy consumption and occupancy area, this data may not be suitable for conducting an official annual comprehensive GHG inventory, and the Guidance recommends data that is ideally based on metered electricity consumption for reporting purposes.*

The screenshot below shows the first page of the purchased electricity section. If you have monthly electric bills or meter readings, then select "Yes" to begin entering data. If instead you only have an annual energy consumption estimate for the entire building or only know building occupancy area, select "No" so that you can be guided through a series of screens that will help you develop greenhouse gas estimates based on this data.



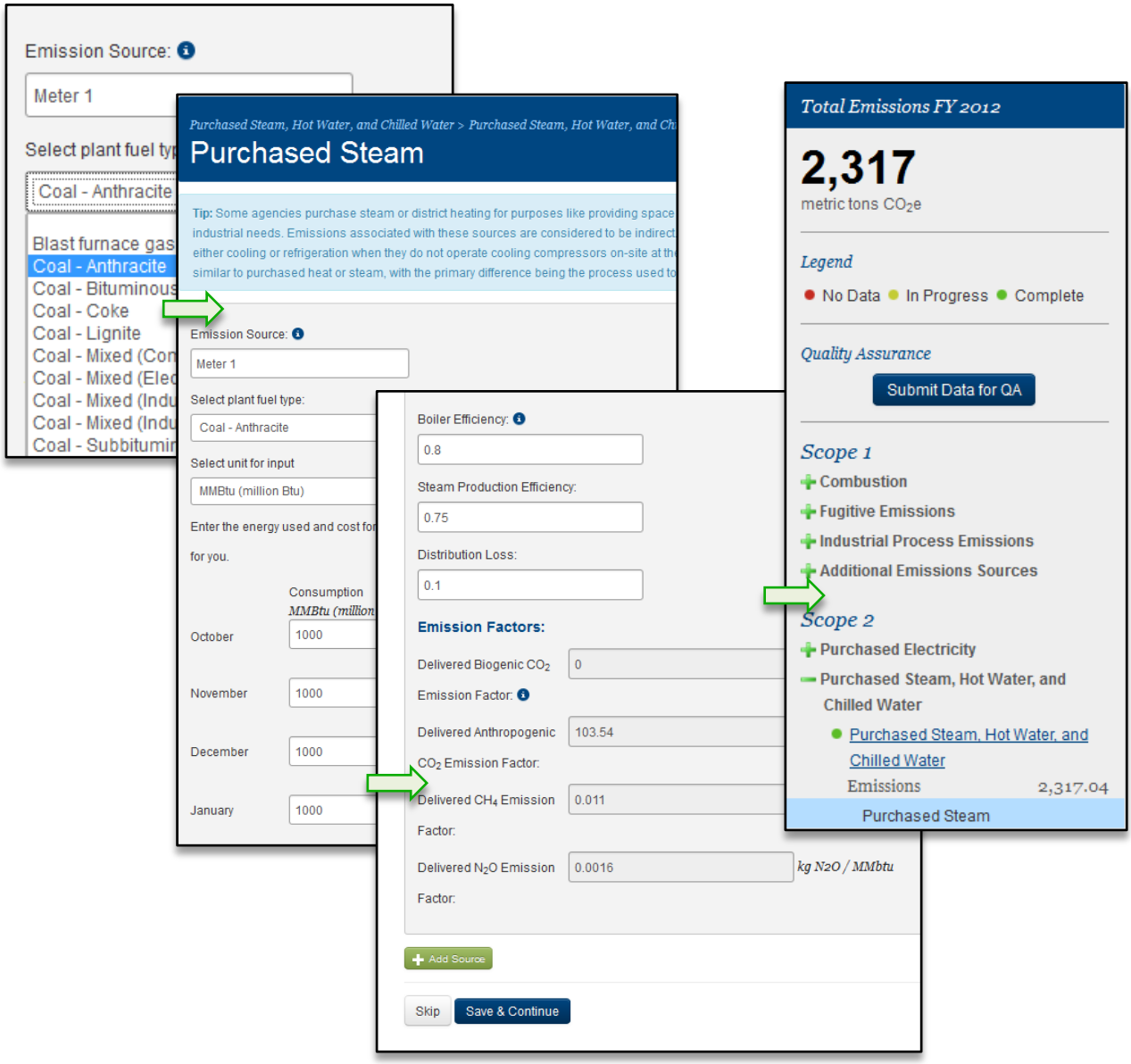
In the example that follows, data is entered for two meters, Meter 1 and Meter 2. After selecting "Yes" in response to the question, "Do you have access to monthly electric bills or electricity meter readings?", 1,000 kilowatt hours is entered as the monthly usage for Meter 1. By clicking the green "+ Add Source" button, the page will expand to allow monthly data for Meter 2 to be entered as well. After entering 5,000 kilowatt hours as the monthly usage for Meter 2, the carbon footprint calculated for both meters is 62 metric tons CO_2 equivalents. Note that the building electricity emissions total is different from the overall emissions total, which also includes the transmission and distribution system losses that are automatically calculated in the Scope 3 section.



Purchased Steam & Hot Water, and Chilled Water

This data section allows accounting for greenhouse gas emissions from steam, hot water, and chilled water. Once information for each section has been entered and the **Save & Continue** button at the bottom of the page is clicked, the Tool calculates the GHG emissions associated with the entries on each page.

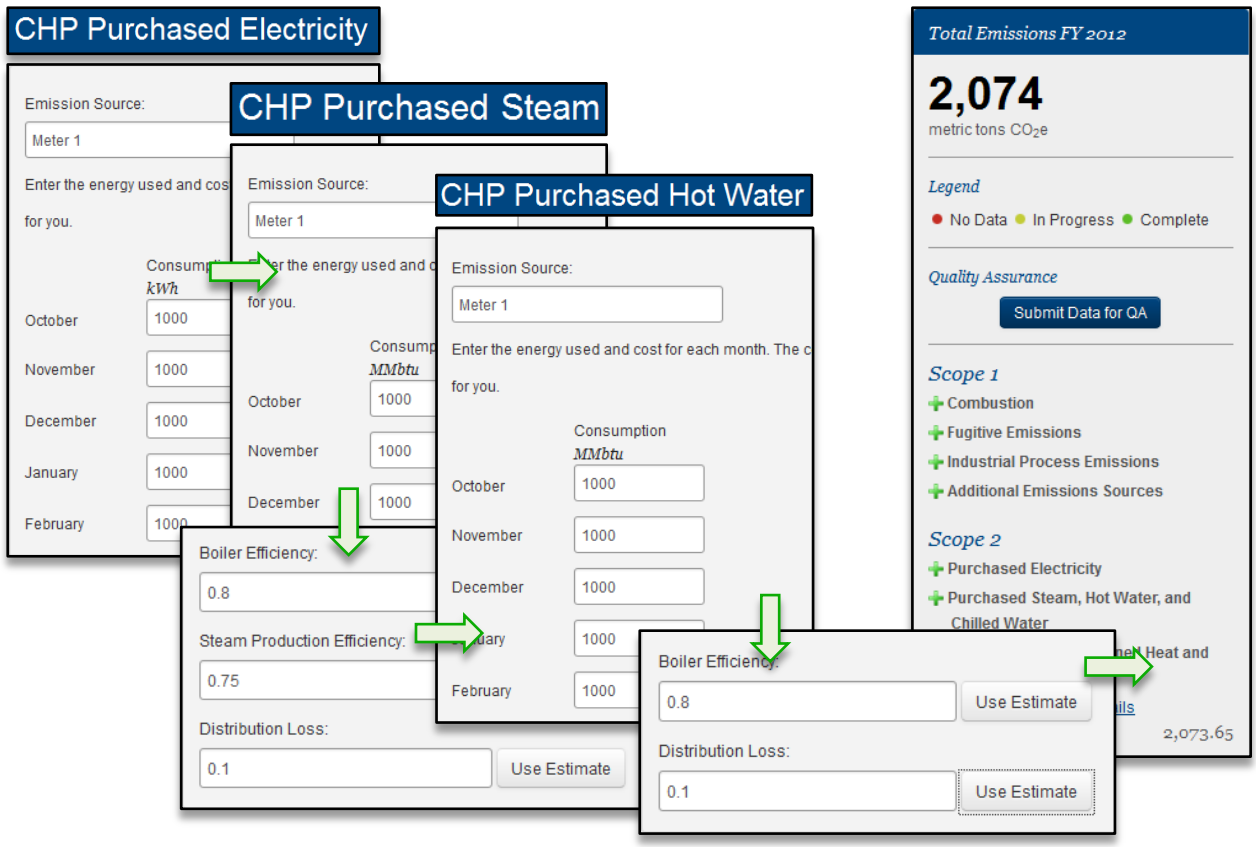
In the example below, the desired fuel and unit types have been selected from the drop-down menus causing the estimate boiler efficiency, steam production efficiency, and distribution loss fields to be automatically populated. These values are recommended by the *Technical Support Document.* 1,000 MMbtu is entered as the monthly usage for Meter 1. After clicking the **Save & Continue** button, the carbon footprint calculated for steam delivered by Meter 1 is 2,317 metric tons CO_2 equivalents.



Purchases from Combined Heat and Power (CHP)

This data section allows accounting for greenhouse gas emissions from purchased electricity, steam, or hot water that is produced by a facility that simultaneously produces electricity and heat. Because the simultaneous production of electricity and heat represents a special Scope 2 case, a different accounting approach is used in this section. For more details on the calculation methodology, please see the *Technical Support Document*.

In the example below, 1,000 kilowatt hours is entered as the monthly Purchased Electricity usage on the first page in the section and 1,000 MMbtu is entered as the monthly Purchased Steam AND Hot Water usage on the second and third pages (With efficiencies of 0.8, 0.75, and 0.1 for Steam and 0.8 and 0.1 for Hot Water). The total carbon footprint calculated for purchased electricity, steam, and hot water is 2,074 metric tons CO_2 equivalents.



Enter Scope 3 Data

Scope 3 GHG emissions are the **indirect GHG emissions** not covered in Scope 2. These emissions occur as a consequence of agency activities, but originate from sources not controlled by the agency.

The following reporting categories are specified in the *Guidance* and are available as GHG Inventory sections in the Carbon Footprint Tool:

1. Federal employee business air travel
2. Federal employee business ground travel
3. Federal employee commuting
4. Contracted solid waste disposal (Municipal solid waste that is sent to a landfill not owned or operated by the agency)
5. Contracted wastewater treatment (Municipal wastewater that is sent to a wastewater treatment plant not owned or operated by the agency)
6. T&D losses associated with purchased electricity

To develop the Scope 3 portion of your inventory, create your Scenario Plan then complete each section as described in the following pages.

Scope 3 Scenario Plan

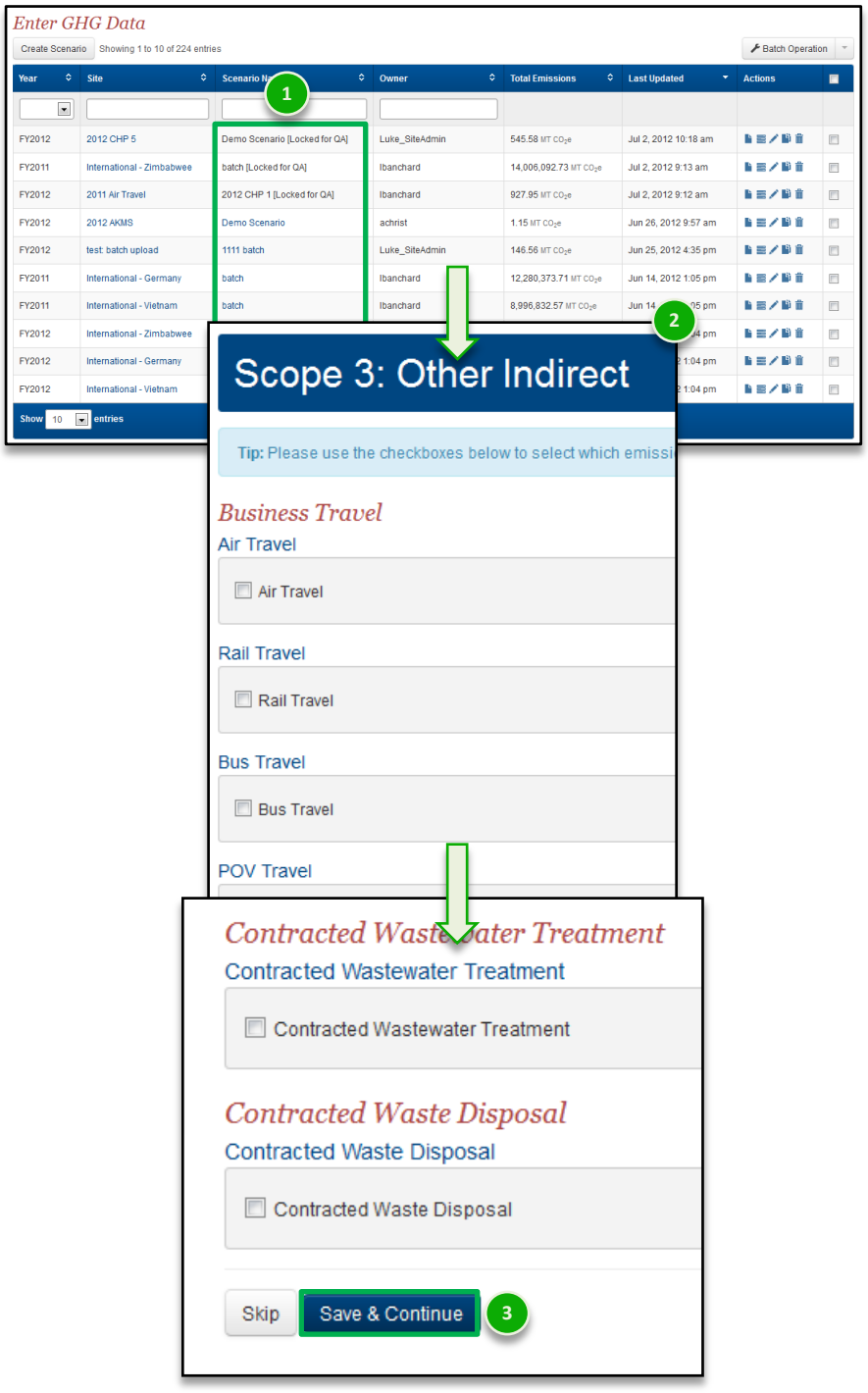
1. Click the hyperlinked name of the scenario of interest from the Scenario List. You will be redirected to the **Scenario Planning** page**.**

   If you accidentally click the **Site Name** instead of the Scenario Name you will be redirected to the ***Site Information*** page.

2. The **Scope 1** section of the scenario appears after you click the scenario name. Click the **Scope 3** link in the left-hand navigation column.

   Select the inventory categories (Business Travel, Employee Commuting, Solid Waste Disposal etc.) for which you wish to provide data.

3. Click the "Save & Continue" button at the bottom of the page to begin entering data for each **Scope 3** emissions category.



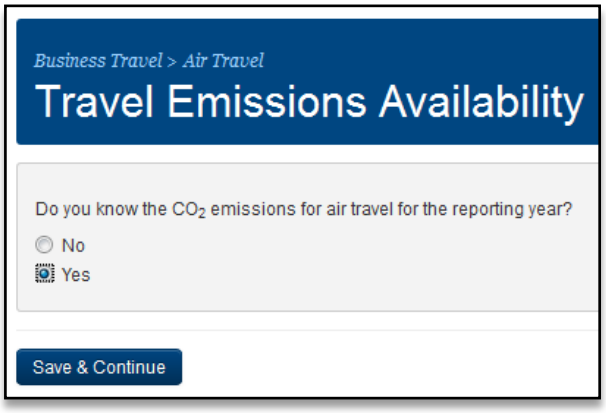
Employee Business Air Travel

There are three options for estimating emissions from air travel:

1. Enter GHG emissions data obtained from the GSA Travel MIS (Traveltrax) System
2. Enter estimates of air travel mileage, by flight segment, for each passenger
3. Enter estimates about the number of trips by air during the reporting year

The screenshot below shows the first page of the employee travel data section. If "Yes" is selected as the response to "Do you know the CO_2 emissions for air travel for the reporting year?" you will need to enter the GHG emissions total obtained from the GSA Travel MIS System. Instructions for accessing the relevant report are available in Appendix C of the *Technical Support Document*. Alternatively, this information can be obtained by emailing a request to carbonfootprint@gsa.gov.

If instead "No" is selected as the response to the question "Do you know the CO_2 emissions for air travel for the reporting year?", you will be directed to subsequent pages where you can estimate emissions from air travel using either Option 2 or Option 3 as described above.



Employee Business Ground Travel

The Carbon Footprint Tool allows accounting for emissions from employee business ground travel by rail, bus, privately owned vehicle and rental vehicle.

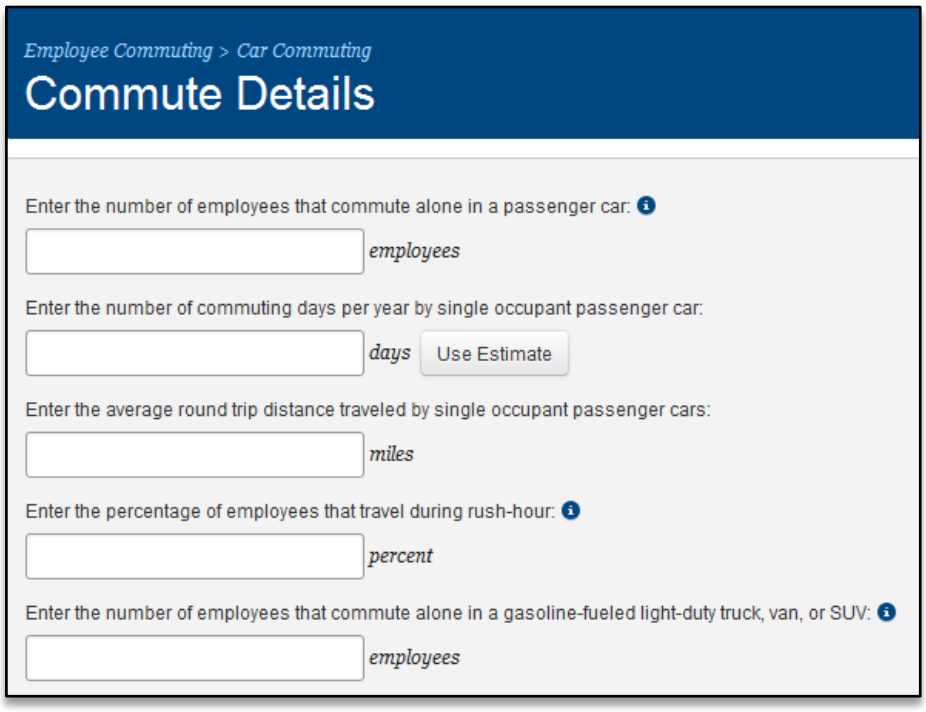
Similar to air travel data, the number of rental cars used by an agency can be accessed through the GSA Travel MIS (Traveltrax) System. Instructions for accessing the relevant report are available in Appendix C of the *Technical Support Document*. Alternatively, this information can be obtained by emailing a request to carbonfootprint@gsa.gov.

Employee Commuting

The preferred approach for calculating employee commuting emissions is through the deployment of a Scope 3 Commuter Survey. The Carbon Footprint Tool includes a turn-key solution that can be used by any agency and was developed in collaboration with the Department of Transportation (DOT), Department of Energy Federal Energy Management Program (DOE FEMP) and the White House Council on Environmental Quality (CEQ). For more information or to request a demo of the Scope 3 Commuter Survey, contact GSA at carbonfootprint@gsa.gov.

The Employee Commuting section of the Carbon Footprint Tool also allows manual input of data related to employee travel to and from work by automobile, rail, bus and any other options that might apply.

The screenshot below displays the commuting details a user can enter if they have decided to forgo the Scope 3 Commuter Survey.



Transmission & Distribution Losses

No user input is required for this section! Transmission and Distribution losses are automatically calculated based on the purchased electricity totals provided under Scope 2.

Contracted Wastewater Treatment

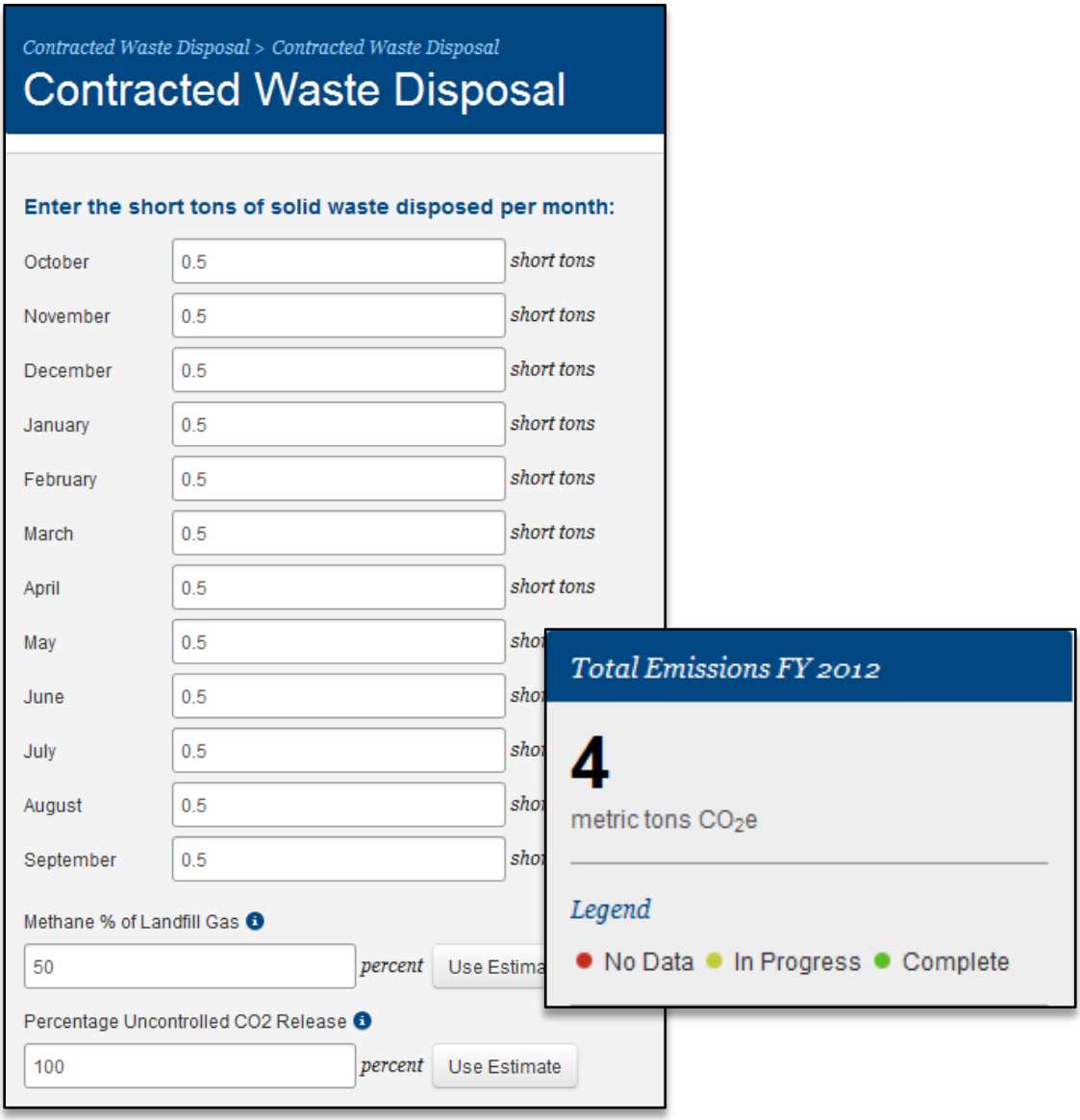
Population-based calculations are used to determine GHG emissions associated with contracted wastewater treatment.

In the screenshot below, 1,000 Agency employees are assumed to be served by contracted wastewater treatment. By selecting the "use estimate" values for all of the remaining questions, the Carbon Footprint Tool will automatically populate the fields with the values recommended by the *Technical Support Document*. After clicking the **Save & Continue** button, the carbon footprint calculated for this single entry is 5 metric tons CO_2 equivalents.

Contracted Solid Waste Disposal

GHG emissions from contracted disposal of agency waste are calculated based on the monthly totals of municipal solid waste that an independent entity disposes off-site.

In the screenshot below, 0.5 short tons (or 1,000 pounds) of solid waste are assumed to be picked up each month for twelve months. By selecting the "use estimate" buttons for the optional fields, The Carbon Footprint Tool will populate the fields with values recommended by the *Technical Support Document.* When the **Save & Continue** button is clicked, the carbon footprint calculated is 4 metric tons CO_2 equivalents.



Enter Renewable Energy Data

Renewable Energy is derived from resources that are renewed indefinitely. These emissions occur as a consequence of agency activities, but originate from sources not controlled by the agency.

The following reporting categories are specified in the *Guidance* and are available as Renewable Energy inventory sections in the Carbon Footprint Tool:

1. Renewable Electricity Generated On-Site
2. Renewable Electricity Generated Off-Site
3. Non-Electric Renewable Energy Sources
4. Both Electric and Non-Electric Renewable Energy Sources On-Site
5. Both Electric and Non-Electric Renewable Energy Sources Off-Site

To develop the Renewable Energy portion of your inventory, create your Scenario Plan then complete each section as described in the following pages.

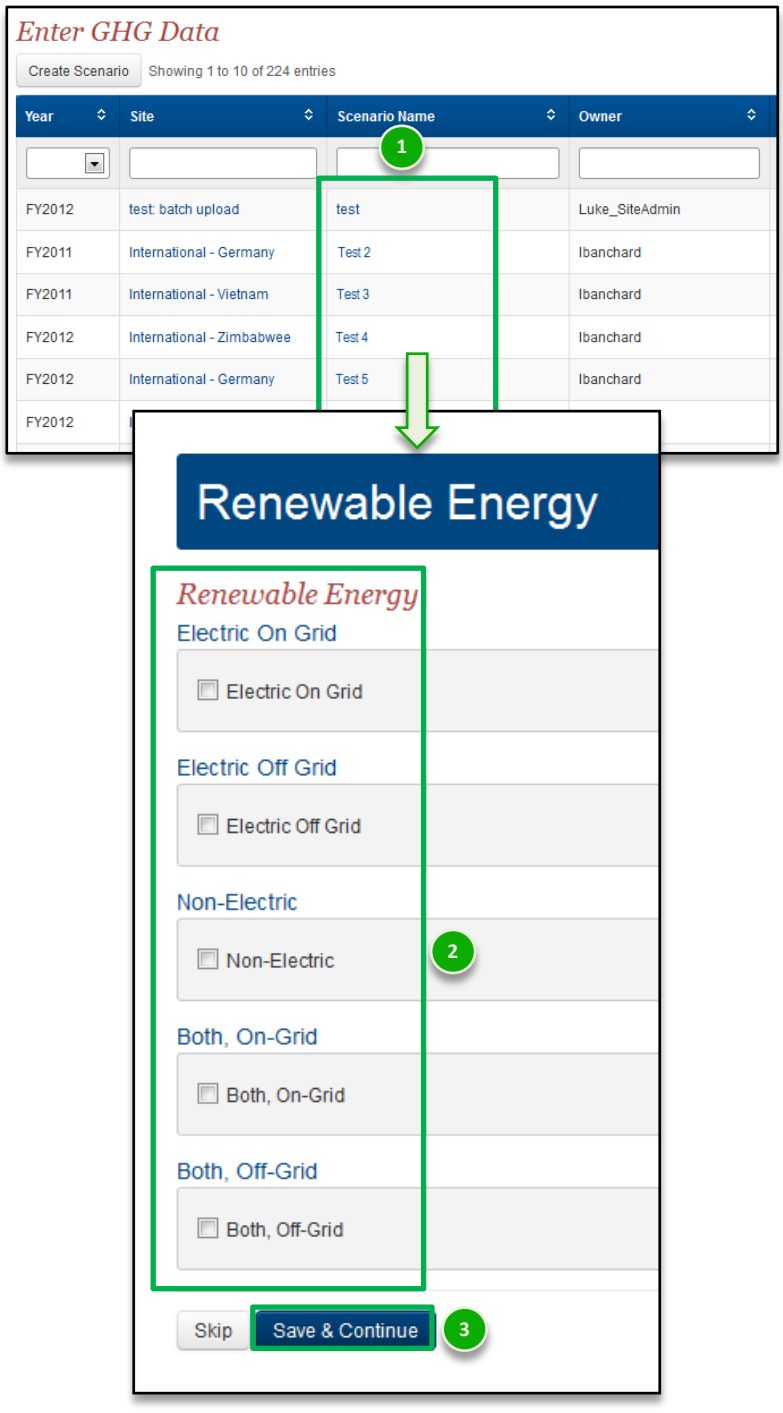
Renewable Energy Scenario Plan

1. Click the hyperlinked name of the scenario of interest from the Scenario List. You will be redirected to the **Scenario Planning** page**.**

   If you accidentally click the **Site Name** instead of the Scenario Name you will be redirected to the ***Site Information*** page.

2. The **Scope 1** section of the scenario appears after you click the scenario name. Click the **Renewable Energy** tab. Select the inventory categories (Electric On Grid, Electric Off Grid, etc).

3. Click the "Save & Continue" button at the bottom of the page to begin entering data for each **Renewable Energy** emissions category.



Electric On Grid

The Electric On Grid data section allows accounting for emissions from Agricultural Byproducts, Solar Photovoltaic, Biofuel, Hydrokinetic, Ethanol, Wind and other fuels used to create electricity even though the site is connected to an electric grid.

Electric Off Grid

The Electric Off Grid data section also allows for accounting of emissions created in the same way. However, it is with sites that are not on the national power grid and therefore rely solely upon the electricity created at the site to function.

Non-Electric

The Non-Electric data section allows for accounting of processes that do not create electricity, but rather are used to create thermal energy. These processes are ways for a site to reduce their overall GHG emissions.

Both, On-Grid

This section allows for data to be collected for sites that use both Electric and Non-Electric forms of renewable energy while still connected to the national power grid.

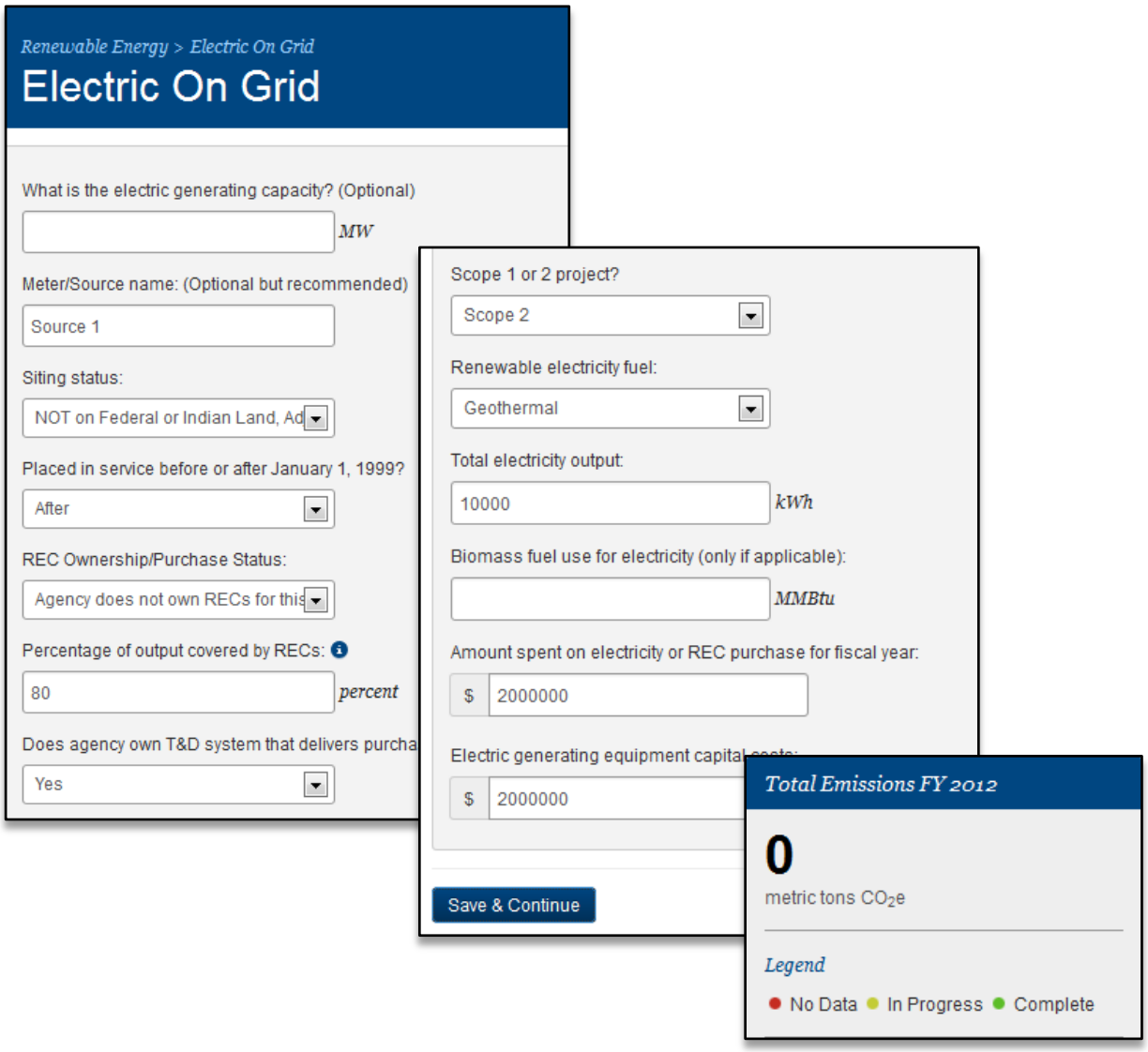
Both, Off-Grid

This section allows for data to be collected for sites that use both Electric and Non-Electric forms of renewable energy, but are not connected to the national power grid.

Once information for any of the Renewable Energy fields has been entered and the **Save & Continue** button at the bottom of the page is clicked, the Tool calculates the GHG emissions associated with the entries on each page.

The screenshots below depict a site whose electric on grid source is putting out 100,000 kWh of electricity per year, with non-biofuel consuming processes. The site spent $2,000,000 on electric generating equipment and another $10,000 on Renewable Energy Credits that year.

Note: The overall emissions remain at zero as the site is using renewable energy sources that offset the GHG emissions created from the process.



Batch Upload

The Batch Upload functionality allows you to complete one-time uploads of large quantities of site attribute and energy consumption data into the Carbon Footprint Analyzer. Instead of entering energy consumption data into scenarios individually for each site, you can load this data for multiple sites with just a few clicks.

Batch Upload

1. Click the "Batch Upload Data" hyperlink in the ***Enter GHG Data*** section of the navigation bar.

   You will be redirected to the ***Batch Upload Data*** *page*.

   Note: You must be logged in as an administrator to see the Batch Upload Data link.

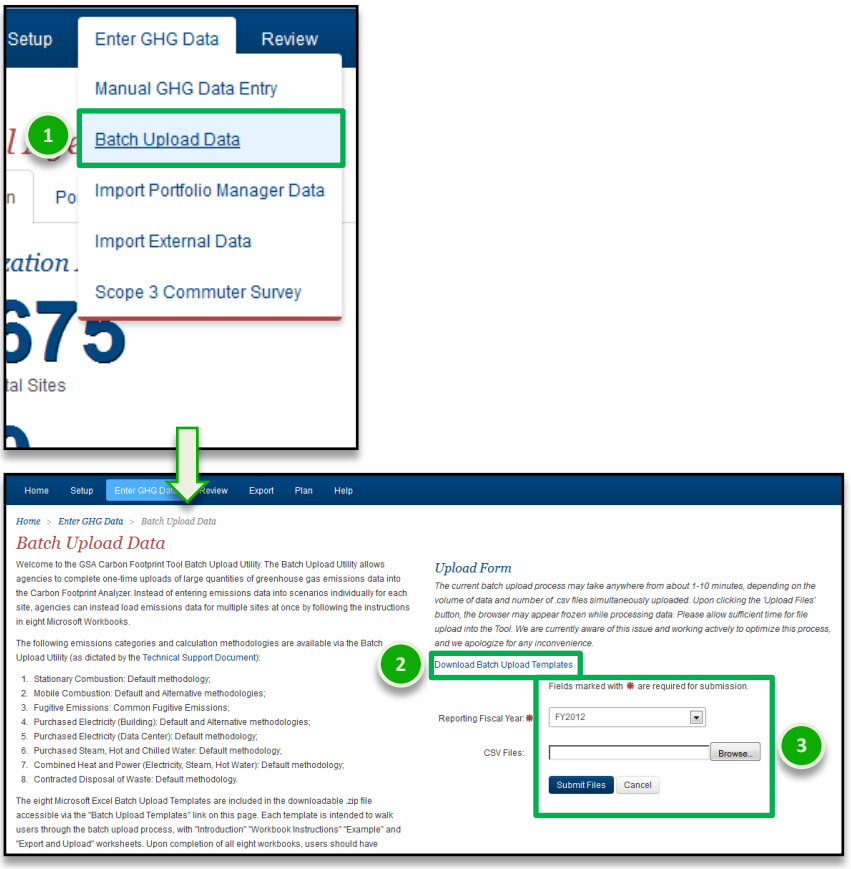
2. Click the "Batch Upload Templates" link in the lower right-hand corner of the ***Batch Upload*** page.

   Save the **BatchuploadTemplates.zip** file that appears to your hard drive.

   Unzip the two files, populate the worksheets that are of interest and be sure to save each sheet as a **.csv** file.

   Note: Each file has an "Introduction" tab with specific instructions for adding the necessary data.

3. Upload the desired templates.



Import Data from External Feeds

The Carbon Footprint Tool can directly import data from existing federal data systems to streamline the data collection and GHG inventory process. The Tool can currently import data directly from EPA Portfolio Manager, the Federal Automotive Statistical Tool (FAST), GSA Travel MIS (Traveltrax), and the GSA STAR and Energy Usage Analysis System (EUAS). Only Administrators may authorize the transfer of data from these systems into the Carbon Footprint Tool.

A description of these systems, the available data, and the process to import the data is provided in the table below.

Data System	Data Available for Import	How to Get Started
Federal Automotive Statistical Tool (FAST)	Scope 1 Mobile Combustion (vehicle fleet fuel consumption).	Ask your Fleet Manager to select the "Export Data to GSA Carbon Footprint Tool" link within the FAST system or email carbonfootprint@gsa.gov
EPA Portfolio Manager	Site attribute data (e.g., address, size); Scope 1 and Scope 2 building energy consumption data for facilities in which data has been entered into EPA Portfolio Manager.	See separate "Instructions for Importing Data from EPA Portfolio Manager" User Guide available on the Help tab in the Carbon Footprint Tool.
GSA STAR and Energy Usage Analysis System (EUAS)	Site attribute data (e.g. address, size) Scope 1 and Scope 2 building energy consumption data for all GSA leased facilities in which GSA pays the utilities.	Email carbonfootprint@gsa.gov
GSA Travel MIS (Traveltrax)	Scope 3 Business Air Travel and Business Ground Travel.	Email carbonfootprint@gsa.gov

EPA Portfolio Manager Data Import

1. Click the "Import Portfolio Manager Data" hyperlink in the ***Enter GHG Data*** section of the navigation bar.

   You will be redirected to the **Import Portfolio Manager Data** *page*.

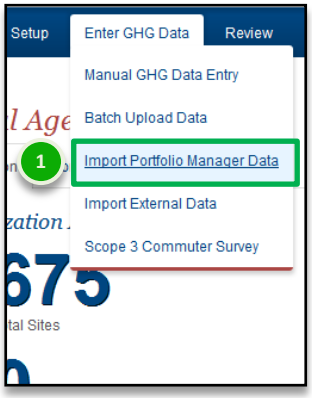
   Note: You must be logged in as an administrator to see the Batch Upload Data link.

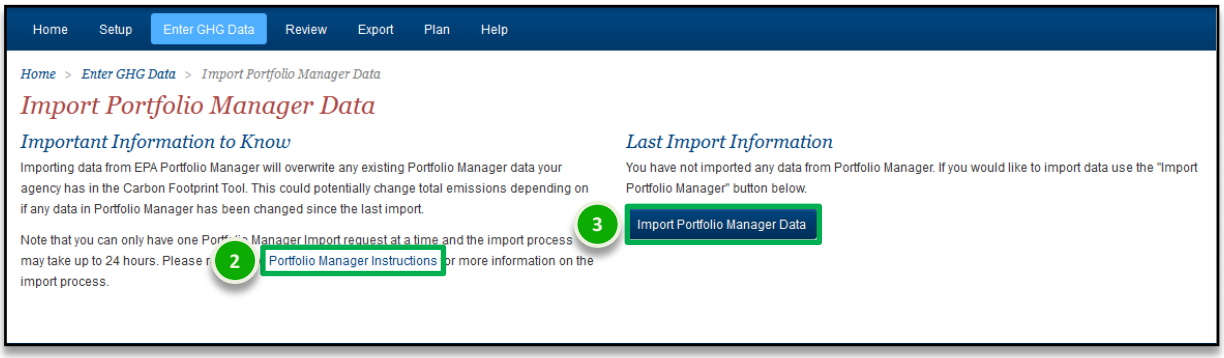
2. Click on the "Portfolio Manager Instructions" link in the upper right-hand corner of the **Import Portfolio Manager Data** page for guidance.

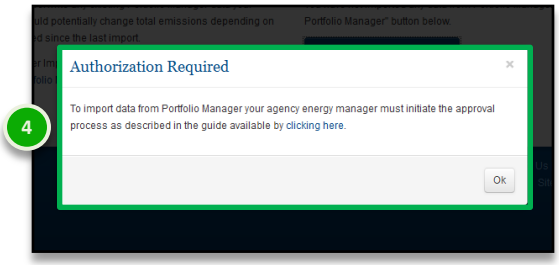
3. Click the "Import Portfolio Manager Data" button to start the import process.

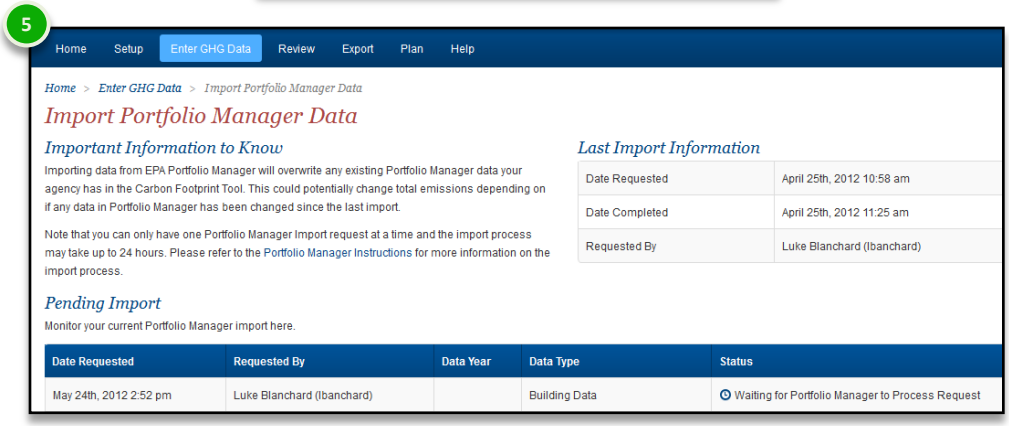
4. **Note:** You will not be able to complete the import process if you have not already completed the import approval process.

5. The "Import Portfolio Manager Data" button will be unavailable if there are any pending imports.









Import External Data Feeds

1. Click the "Import External Data" hyperlink in the ***Enter GHG Data*** section of the navigation bar.

   You will be redirected to the **Import External Data** *page*.

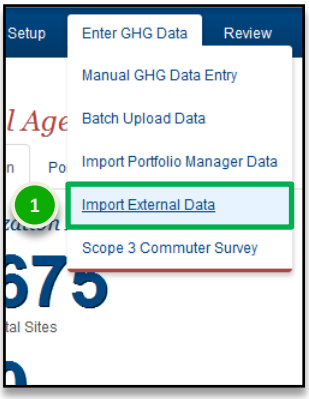
   Note: You must be logged in as an administrator to see the Batch Upload Data link.

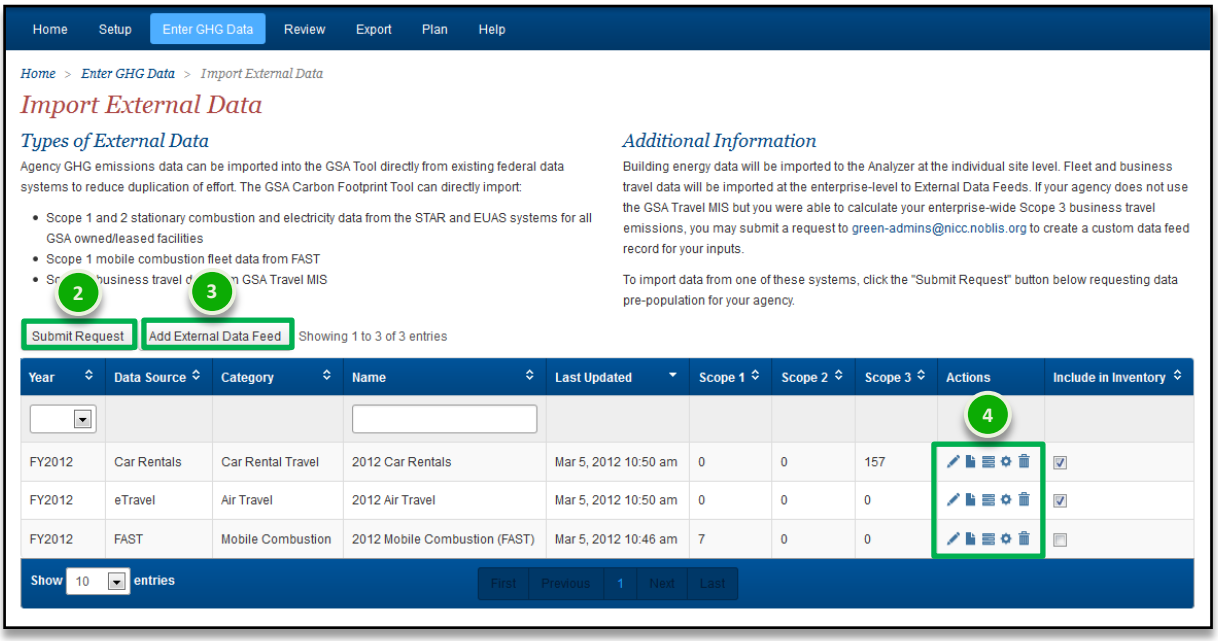
2. Click on the "Submit Request" button above the Data Feed list to request a custom data feed record for your inputs.

3. Click the "Add External Data Feed" button above the Data Feed list to create a new Data Feed.

   You will be redirected to the **Create/Edit External Data Feed** *page*.

4. Once filled out you can Run the Carbon Footprint Analyzer, See the Enterprise Report, Run the Dashboard, Edit the Feed, and Delete the feed using the action buttons on the right side of the External Data Feed list..



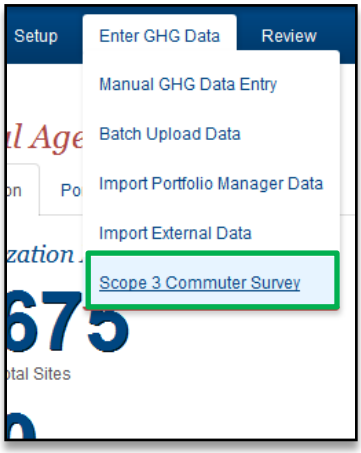


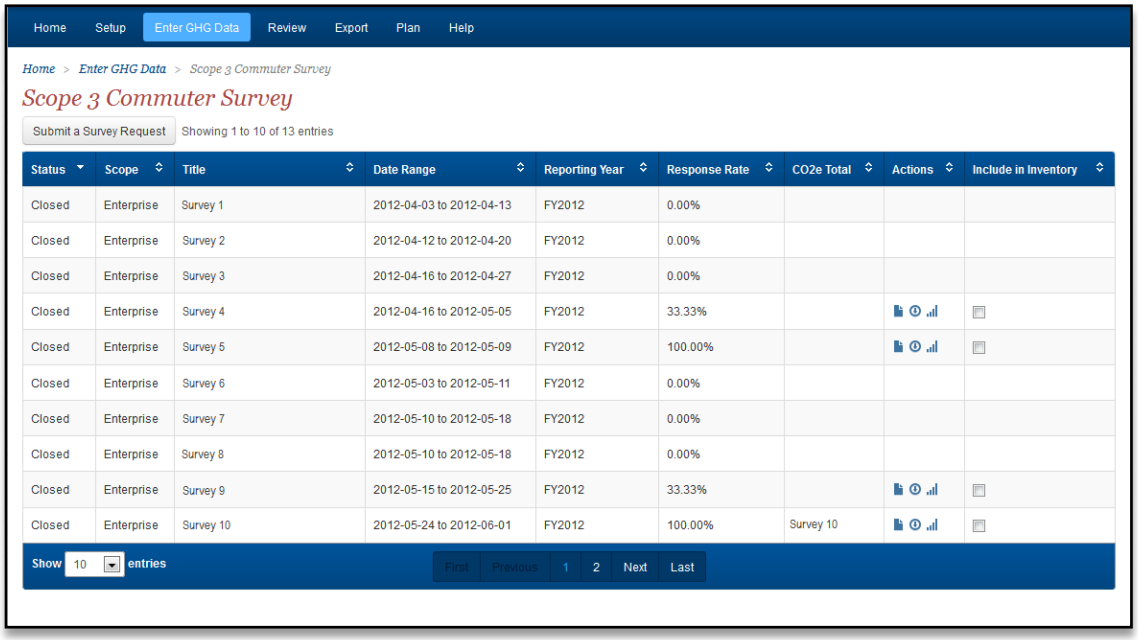
Scope 3 Commuter Survey

The preferred approach for calculating employee commuting emissions is through the deployment of a Scope 3 Commuter Survey. The Carbon Footprint Tool includes a turn-key solution that can be used by any agency and was developed in collaboration with the Department of Transportation (DOT), Department of Energy Federal Energy Management Program (DOE FEMP) and the White House Council on Environmental Quality (CEQ). For more information or to request a demo of the Scope 3 Commuter Survey, contact GSA at carbonfootprint@gsa.gov.

The Employee Commuting section of the Carbon Footprint Tool also allows manual input of data related to employee travel to and from work by automobile, rail, bus and any other options that might apply.

The screenshot below displays the commuting details a user can enter if they have decided to forgo the Scope 3 Commuter Survey.





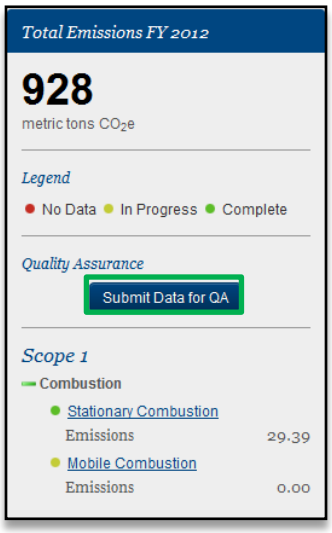
Review

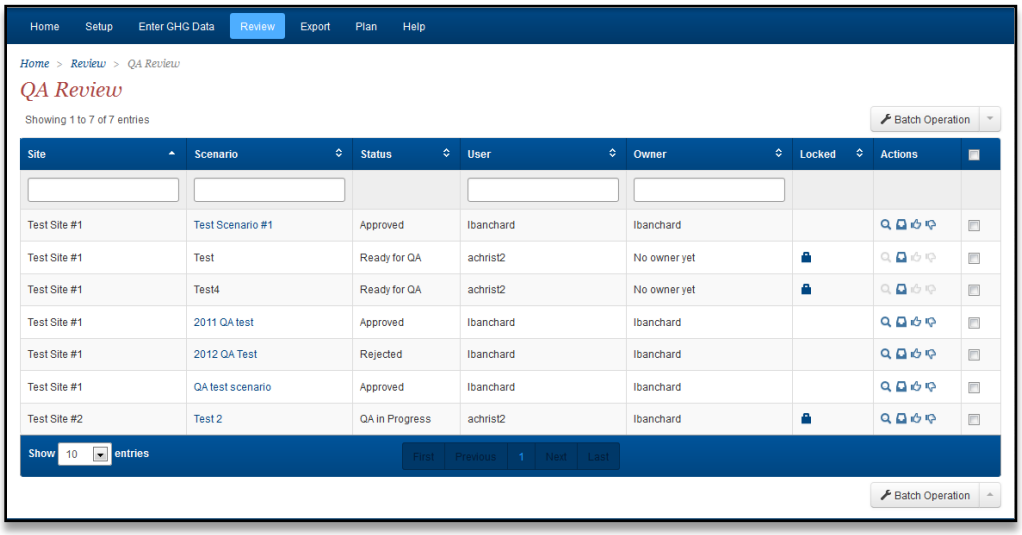
QA Review

The Carbon Footprint Tool has data review capabilities to ensure accurate reporting of GHG emissions for a scenario. Data review involves three steps: **submitting a scenario for QA**, **performing QA for a scenario** and **correcting flagged errors in a scenario**.

Submitting a Scenario for QA Review

In the screenshot below, a scenario has been created and data has been entered. By clicking the **Submit Data for QA** button, you are prompted with a warning message that modifications to the scenario cannot be made while the scenario is under the QA process. Click **Ok** to proceed and submit the scenario for QA review.





Performing QA Review for a Scenario

The images below display the path a QA reviewer would take in order to navigate through, and review, a scenario.

1. Click on the **QA Review** tab.

2. Then click on the **Take QA Ownership** ( ) icon to take ownership of QA for a scenario and begin reviewing data entered.

3. Begin reviewing the scenario by clicking on the Scenario Name.

   Note: *any section that changed by +/- 3% from the previous year will have a yellow warning flag ( ).*

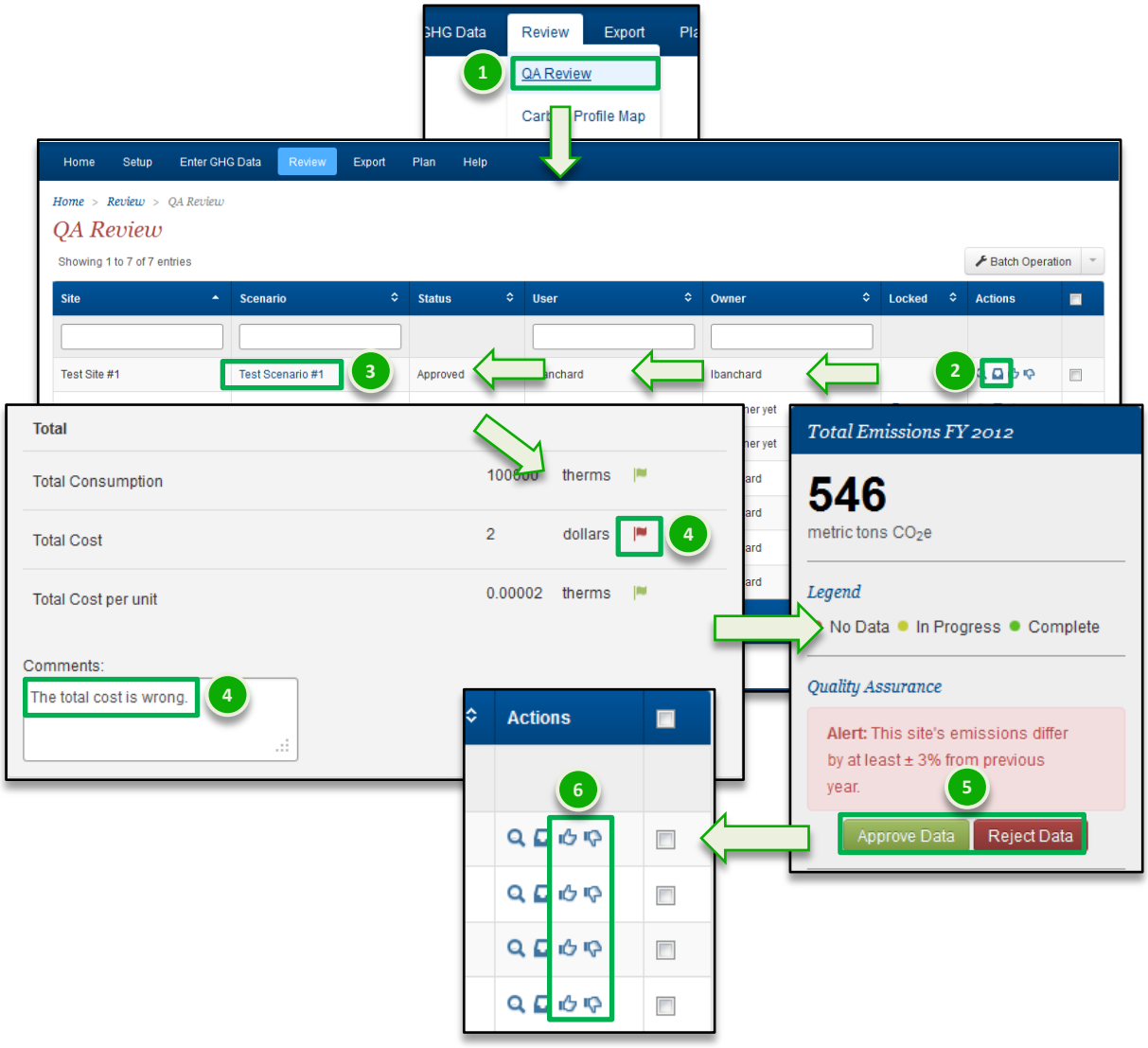
4. Click on the **Green Flag** ( ) icon to flag that an entry is inaccurate.

   Note*: You can also leave a comment for any changes that need to be made.*

5. Click on the **Approve Data** or **Reject Data** button according to your findings.

   Note: *if you flag any area, you will not be able to Approve Data.*

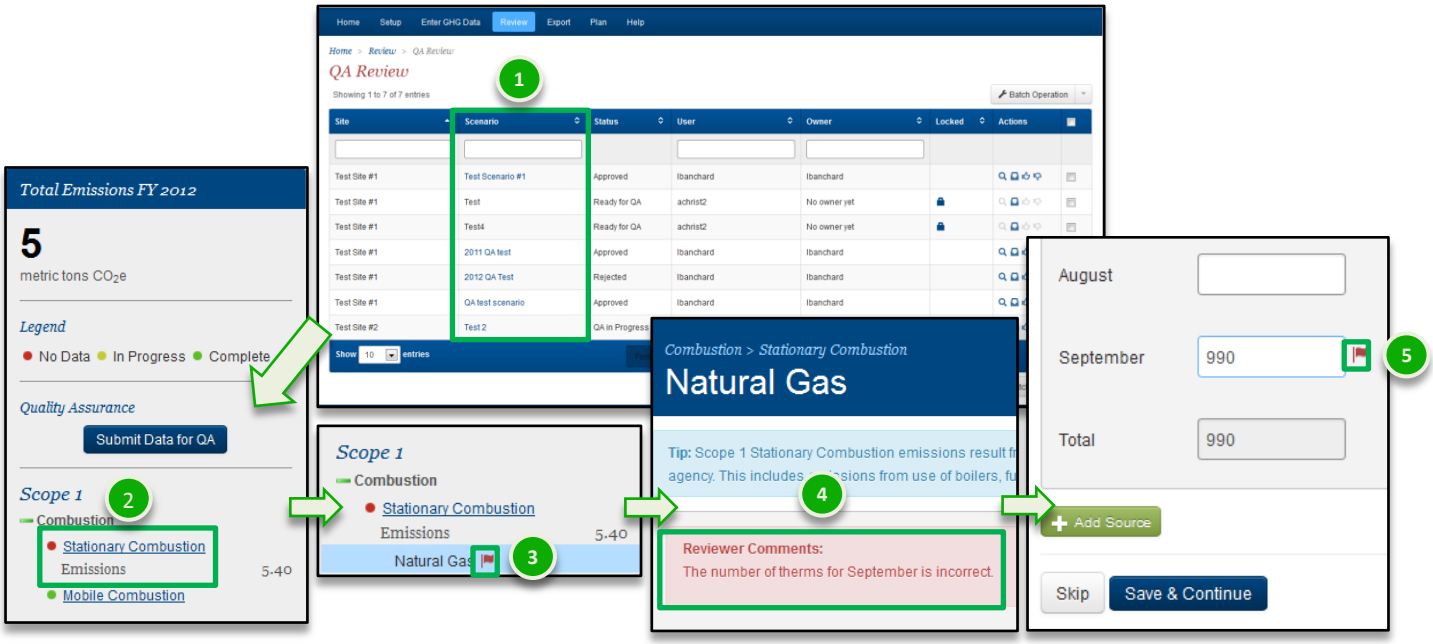
6. Clicking on the "**thumbs up**" or "**thumbs down**" buttons, on the QA scenario list page will also approve or reject a scenario.



Fixing Errors for a Scenario

After a scenario is rejected by the QA reviewer you will receive an email announcing that it is no longer locked for editing. You will then need to click on the scenario name to review the changes suggested by your QA reviewer.

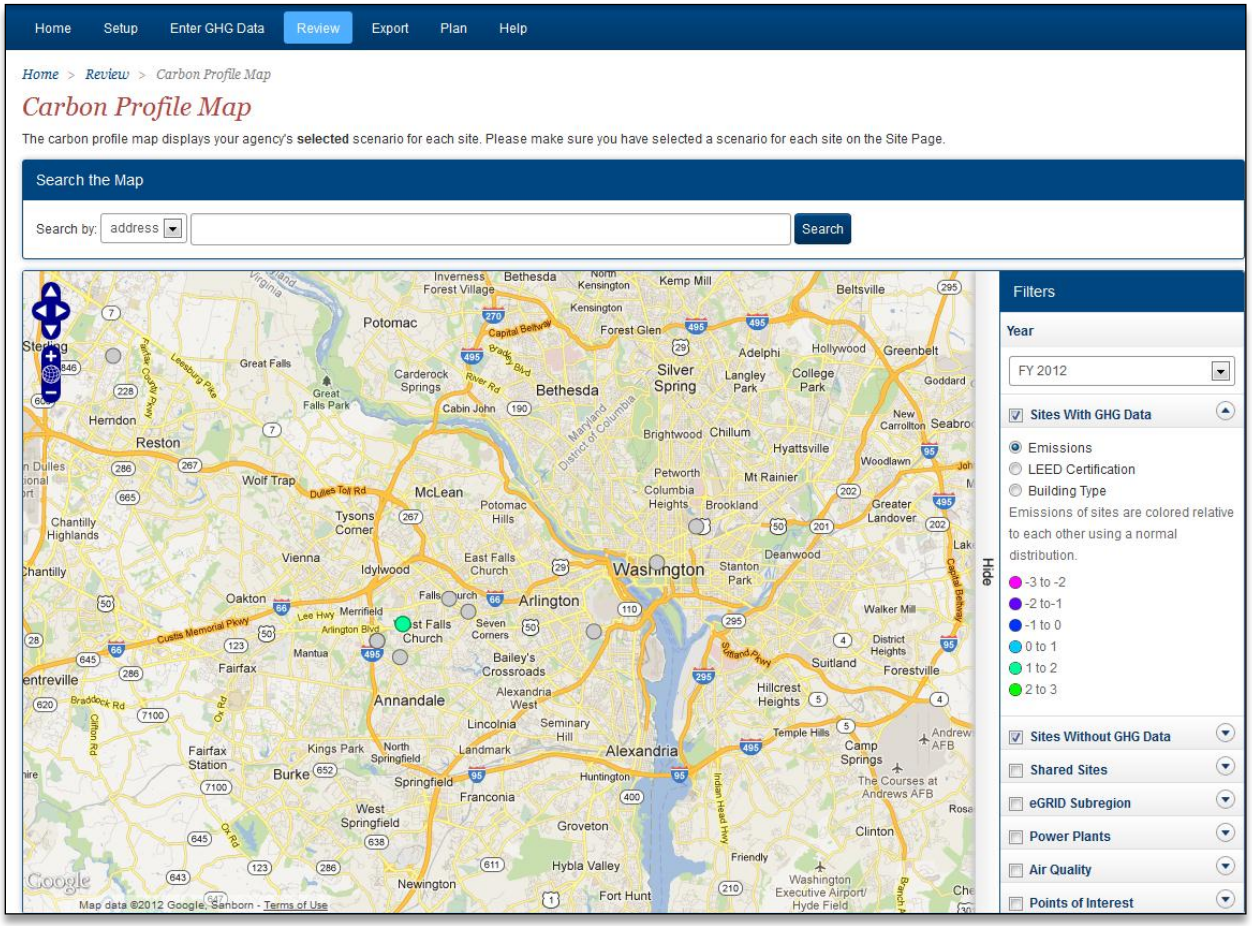
1. Click on the **Scenario Name**.
2. Then navigate to the sections with red "incomplete" dots ( ) designating them as areas needing correction.
3. When that section is opened a Red Flag ( ) will designate which page needs to be corrected.
4. The reviewer's comment will be listed at the top of the page.
5. The question requiring correction will have a red flag ( ).



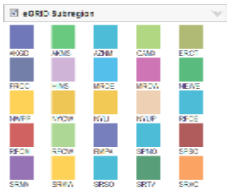
After all the corrections have been made you can then submit the scenario for review and approval again.

View Carbon Profile Map

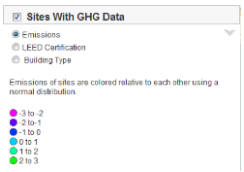
The Carbon Profile Map displays net carbon emissions for Agency sites. Clicking the check boxes for each section of the map controls reveals multiple layers that can be added to the map. The layers available are as follows: Sites with GHG Data, Emissions, LEED Certification, Building Type, Sites without GHG Data, Power Plants, and Air Quality. A description of each layer is on the following page.



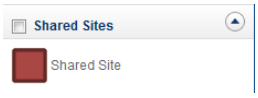
Carbon Profile Map Layers



eGRID Subregions. eGRID (Emissions & Generation Resource Integrated Database) Subregions are used to determine the fuel mix that contributes to emissions associated with Scope 2 Purchased Electricity. Electricity purchased from different eGRID regions will have different (CO_2e/kWh) values. [5]



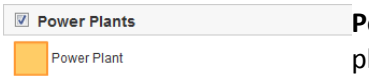
Site Emissions. The site emissions layer displays carbon emissions of the various agency sites relative to each other using a normal distribution.



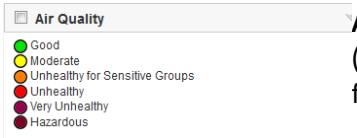
Shared Sites. The site sharing layer indicates buildings of other nearby Federal Agencies that are also using the Carbon Footprint Tool.

LEED Certification. The LEED Certification Layer indicates which sites have LEED Certified buildings and at what level if applicable.

Building Type. The building type layer provides a quick scan of the types of buildings that were included in your agency's emissions analysis.



Power Plants. The power plants layer shows the number of plants in your inventory generating greater than one terawatt-hour (1 TWh) annually.



Air Quality. The air quality layer tracks EPA's Air Quality Index (AQI) and provides an indication of the air quality at your facility. This data is refreshed hourly.[6]

[5] For more information on e-grid subregions, see http://www.epa.gov/cleanenergy/documents/egridzips/The_Value_of_eGRID_Dec_2009.pdf

[6] Read the EPA's AQI guide for more information on how the index was developed - http://www.epa.gov/airnow/aqi_brochure_08-09.pdf

Reports

Reports provide a transparent explanation of the emissions data source, the emissions factors used, and the calculations that were performed to turn emissions data into CO_2e. Use the **GHG Reports** tab to view aggregate summaries of GHG emissions by scenario, site group or enterprise.

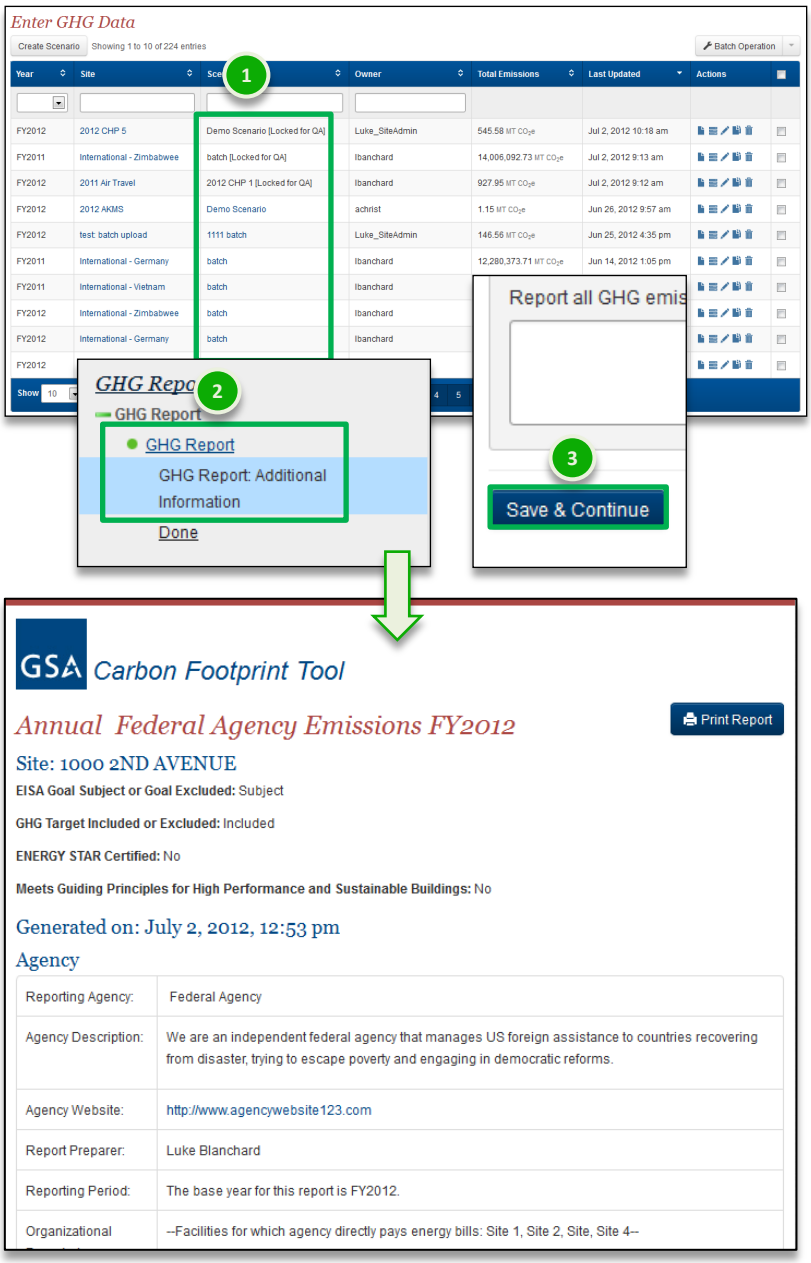
Get Scenario Report

1. Select the Scenario for which you wish to generate a GHG Report. You will be directed to the **Scenario** page.

2. Fill out the scenario as needed then navigate to the **GHG Report** section at the bottom of the Left-Hand Navigation Column.

3. Click the **Save & Continue** *button* to be directed to a page where you can view the GHG report for your scenario.

NOTE: You can also click the **Run Report** icon ( ) in the "Actions" column of the Scenario List to generate the report in one step.

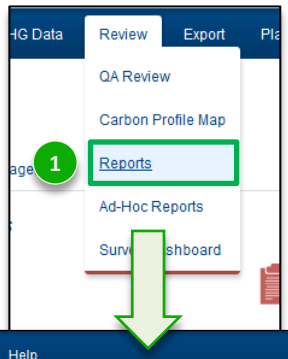


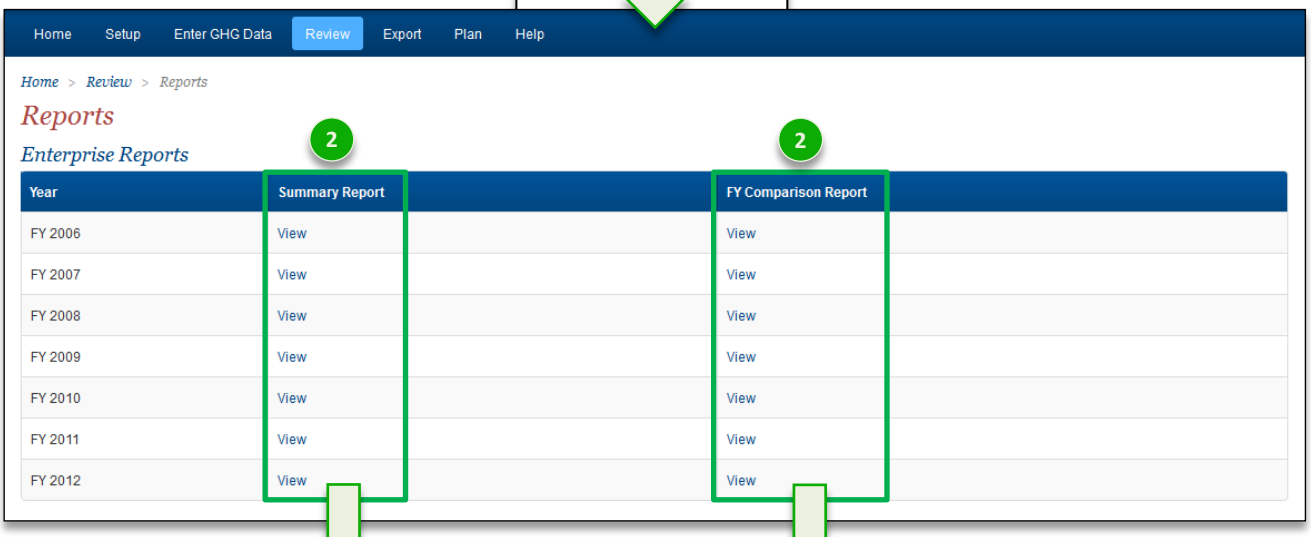
Get Enterprise Report

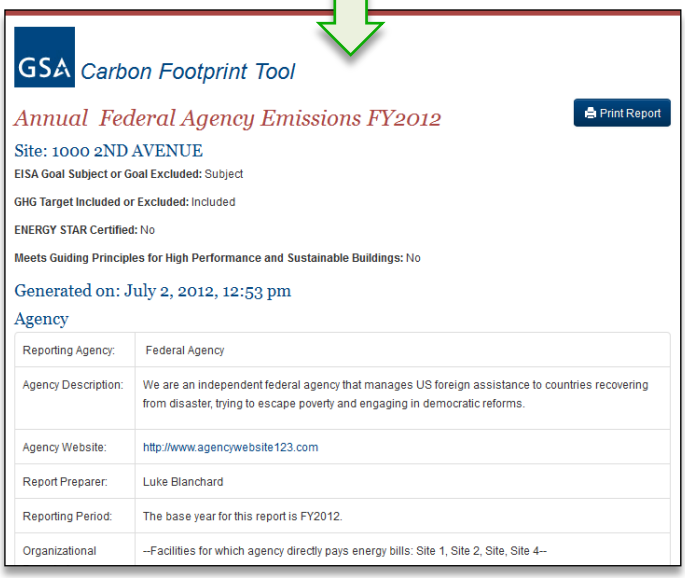
1. Go to the **Reports** link in the "Review" section of the navigation bar.

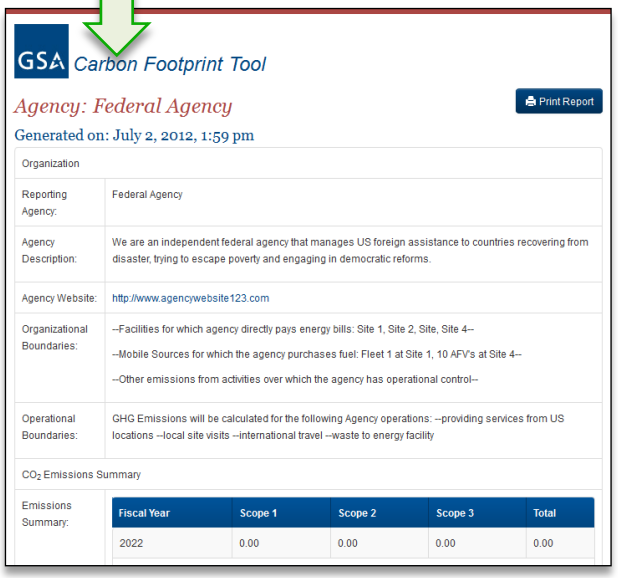
2. Select the Enterprise Report of interest by clicking the "View" hyperlink.

   The **Enterprise Reports** display the yearly Summary Report for all GHG emissions or the FY Comparison Report for ALL years.







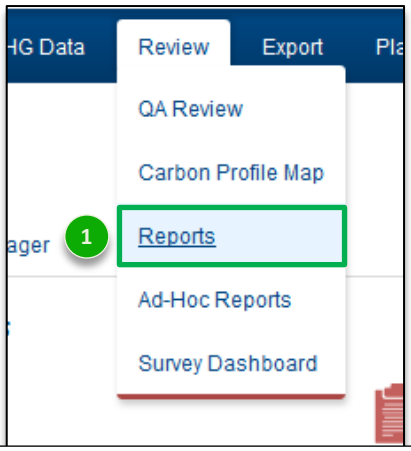


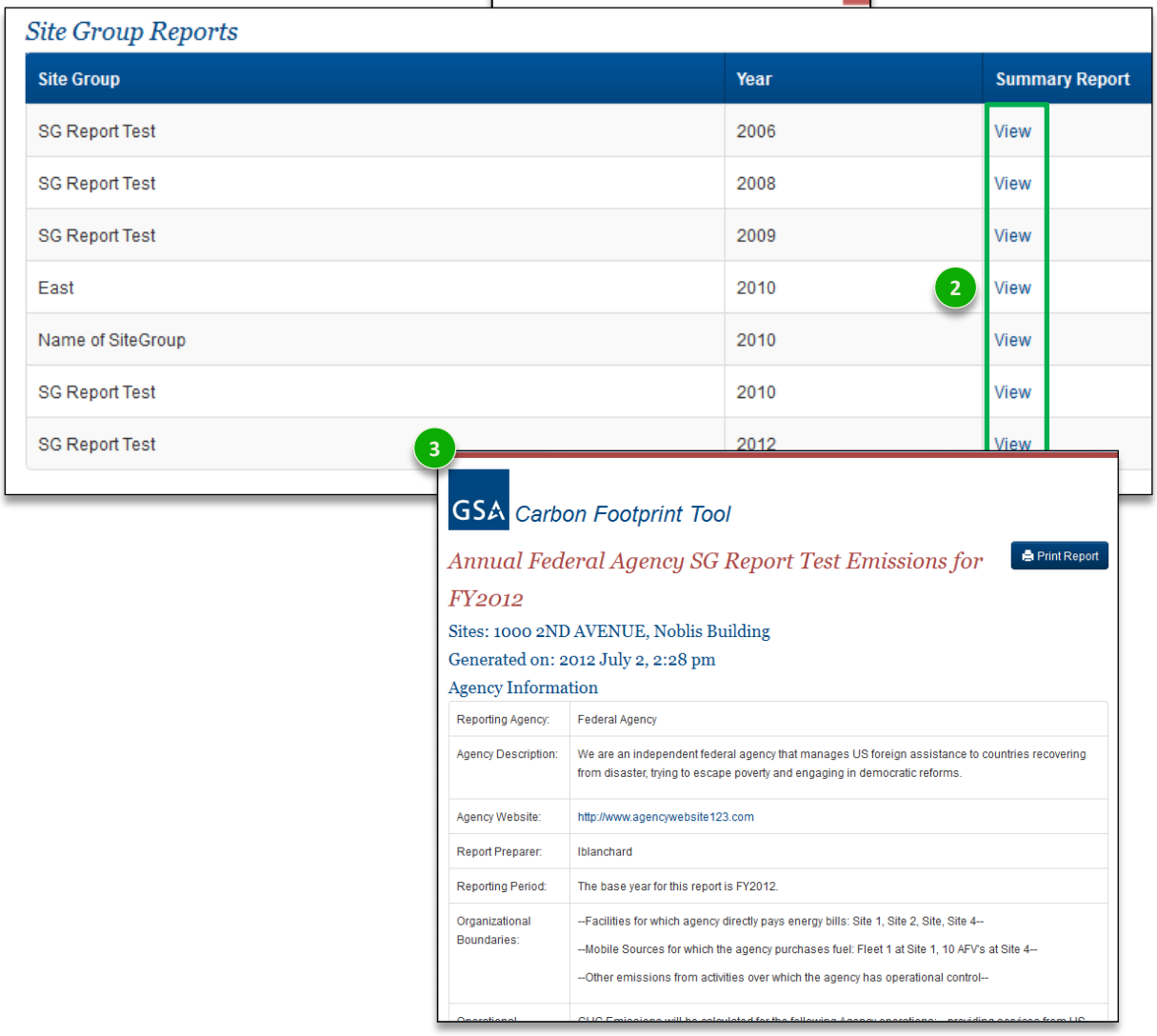
Get Site Group Report

1. Click the **Reports** hyperlink in the "Review" section of the navigation bar. You will be directed to the "Reports" page.

2. Click one of the **Summary Reports** links.

3. You will be directed to the **Report** page for the chosen year.



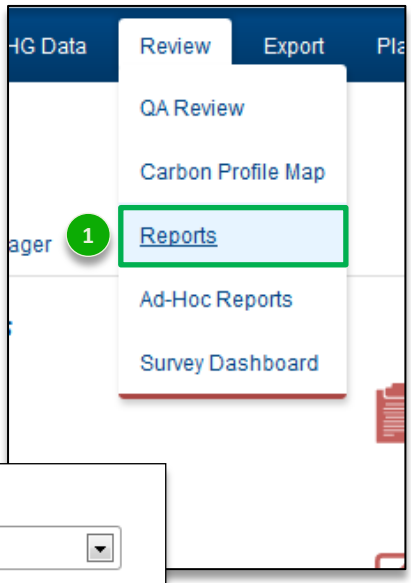


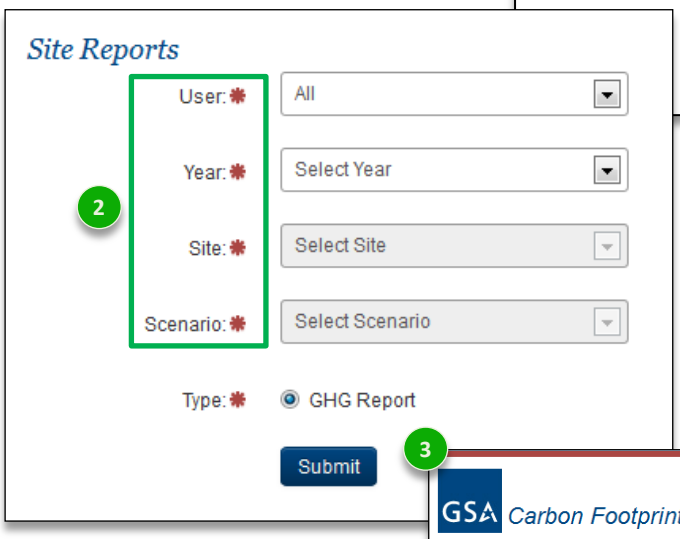
Get Site Reports

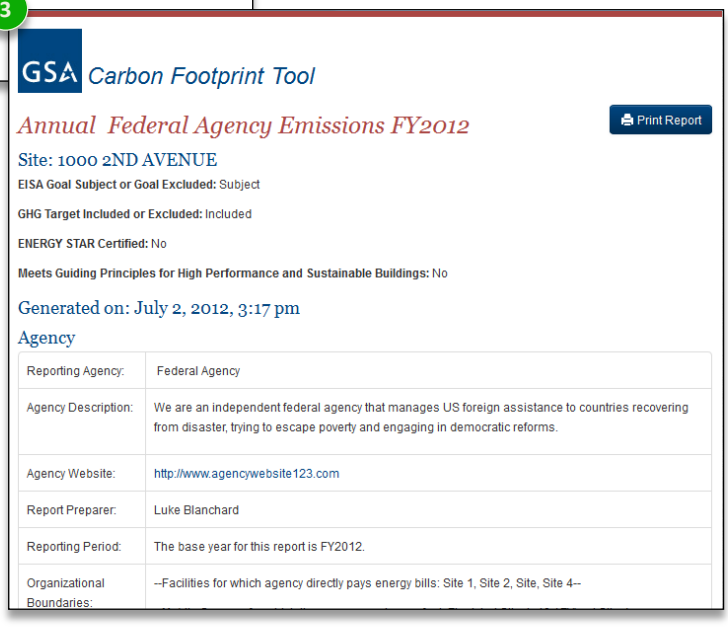
1. Click the **Reports** hyperlink in the "Review" section of the navigation bar. You will be directed to the "Reports" page.

2. Select the desired **User**, **Year**, **Site**, **Scenario**, and click the "Submit" button.

3. This will open a new window with the Site Report you selected.







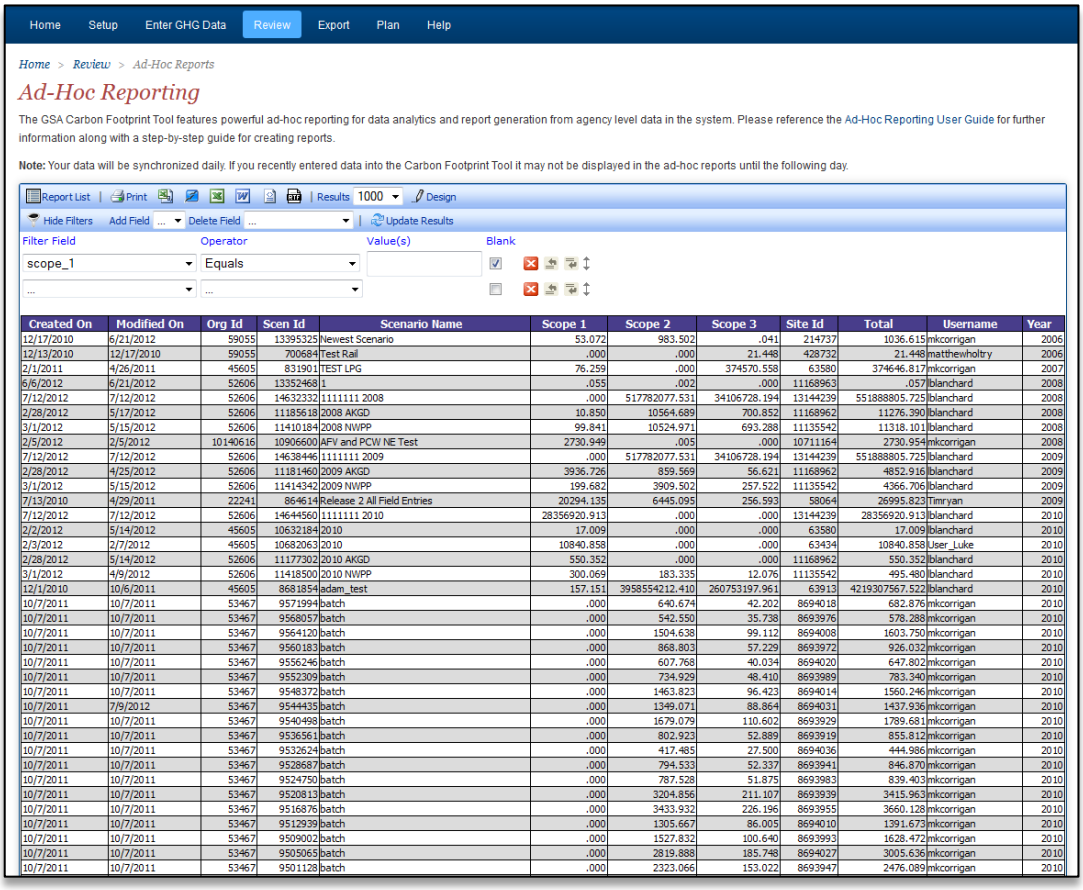
Ad Hoc Reporting

The ad-hoc reporting functionality allows users to create and customize reports using multiple database views.

Ad-hoc Reporting includes pre-developed reports for the most commonly requested data. These reports are located under the "Base Reports" section of the Report List. These Base Reports are recommended for novice users or for users who are exploring the ad-hoc reporting feature for the first time. See *Base Reports Quick Start* for more information.

Ad-hoc Reporting also allows "power users" to design and generate their own reports based on specific inputs, calculations, or other metrics. By creating reports from scratch, ad-hoc reporting allows you to produce powerful analytics from the data you provided in the Carbon Footprint Tool database. See *Design Reports Quick Start* for more information.

Please reference the Ad-Hoc Reporting User Guide for further information.



Created On	Modified On	Org Id	Scen Id	Scenario Name	Scope 1	Scope 2	Scope 3	Site Id	Total	Username	Year
12/17/2010	6/21/2012	59055	13395325	Newest Scenario	53.072	983.502	.041	214737	1036.615	mkcorrigan	2006
12/13/2010	12/17/2010	59055	700684	Test Rail	.000	.000	21.448	428732	21.448	matthewholtry	2006
2/1/2011	4/26/2011	45605	831901	TEST LPG	76.259	.000	374570.558	63580	374646.817	mkcorrigan	2007
6/6/2012	6/21/2012	52606	13352468	1	.055	.002	.000	11168963	.057	blanchard	2008
7/12/2012	7/12/2012	52606	14632332	1111111 2008	.000	517782077.531	34106728.194	13144239	551888805.725	blanchard	2008
2/28/2012	5/17/2012	52606	11185618	2008 AKGD	10.850	10564.689	700.852	11168962	11276.390	blanchard	2008
3/1/2012	5/15/2012	52606	11410184	2008 NWPP	99.841	10524.971	693.288	11135542	11318.101	blanchard	2008
2/5/2012	2/5/2012	10140616	10906600	AFV and PCW NE Test	2730.949	.005	.000	10711164	2730.954	mkcorrigan	2008
7/12/2012	7/12/2012	52606	14638446	1111111 2009	.000	517782077.531	34106728.194	13144239	551888805.725	blanchard	2009
2/28/2012	4/25/2012	52606	11181460	2009 AKGD	3936.726	859.569	56.621	11168962	4852.916	blanchard	2009
3/1/2012	5/15/2012	52606	11414342	2009 NWPP	199.682	3909.502	257.522	11135542	4366.706	blanchard	2009
7/13/2010	4/29/2011	22241	864614	Release 2 All Field Entries	20294.135	6445.095	256.593	58064	26995.823	Timryan	2009
7/12/2012	7/12/2012	52606	14644560	1111111 2010	28356920.913	.000	.000	13144239	28356920.913	blanchard	2010
2/2/2012	5/14/2012	45605	10632184	2010	17.009	.000	.000	63580	17.009	blanchard	2010
2/3/2012	2/7/2012	45605	10682063	2010	10840.858	.000	.000	63434	10840.858	User_Luke	2010
2/28/2012	5/14/2012	52606	11177302	2010 AKGD	550.352	.000	.000	11168962	550.352	blanchard	2010
3/1/2012	4/9/2012	52606	11418500	2010 NWPP	300.069	183.335	12.076	11135542	495.480	blanchard	2010
12/1/2010	10/6/2011	45605	8681854	adam_test	157.151	3958554212.410	260753197.961	63913	421930567.522	blanchard	2010
10/7/2011	10/7/2011	53467	9571994	batch	.000	640.674	42.202	8694018	682.876	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9568057	batch	.000	542.550	35.738	8693976	578.288	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9564120	batch	.000	1504.638	99.112	8694008	1603.750	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9560183	batch	.000	868.803	57.229	8693972	926.032	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9556246	batch	.000	607.768	40.034	8694020	647.802	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9552309	batch	.000	734.929	48.410	8693989	783.340	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9548372	batch	.000	1463.823	96.423	8694014	1560.246	mkcorrigan	2010
10/7/2011	7/9/2012	53467	9544435	batch	.000	1349.071	88.864	8694031	1437.936	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9540498	batch	.000	1679.079	110.602	8693929	1789.681	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9536561	batch	.000	802.923	52.889	8693919	855.812	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9532624	batch	.000	417.485	27.500	8694036	444.986	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9528687	batch	.000	794.533	52.337	8693941	846.870	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9524750	batch	.000	787.528	51.875	8693983	839.403	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9520813	batch	.000	3204.856	211.107	8693939	3415.963	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9516876	batch	.000	3433.932	226.196	8693955	3660.128	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9512939	batch	.000	1305.667	86.005	8694010	1391.673	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9509002	batch	.000	1527.832	100.640	8693993	1628.472	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9505065	batch	.000	2819.888	185.748	8694027	3005.636	mkcorrigan	2010
10/7/2011	10/7/2011	53467	9501128	batch	.000	2323.066	153.022	8693947	2476.089	mkcorrigan	2010

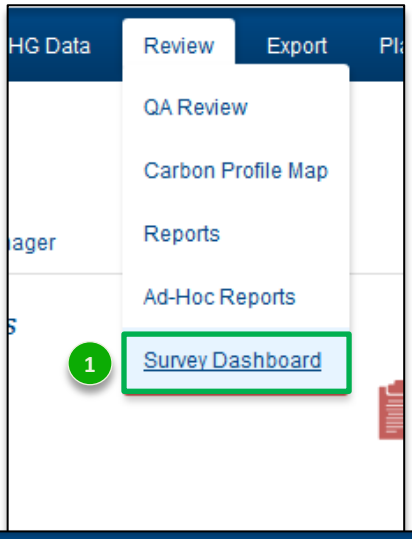
Survey Dashboard

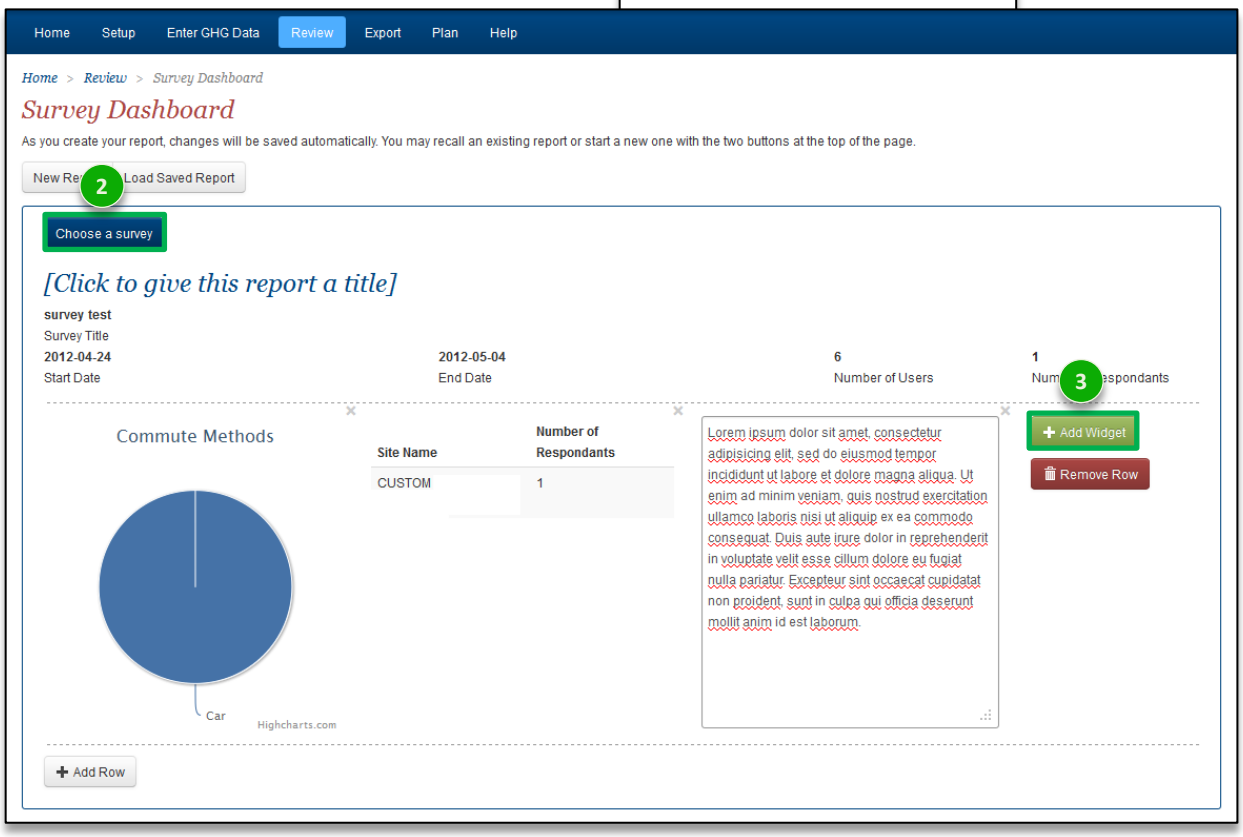
The Survey Dashboard allows the user to create a customizable dashboard which can visually report the results of a survey.

1. Click the **Survey Dashboard** hyperlink in the "Review" section of the navigation bar. You will be directed to the "Survey Dashboard" page.

2. Click the **Choose a Survey** button to select the desired survey for your report.

3. Clicking the **Add Widget** will allow you to add one of three items to the row: Pie Chart, Number of Respondents per Site Table, and Textbox.





Batch Download

1. On the **Scenario List** page, under the "Analyzer" tab, click the Site associated with the scenario for which you wish to download data.

2. On the **Site Information** page, scroll down to the Scenarios section and click the radio button next to the scenario for which you wish to download data.

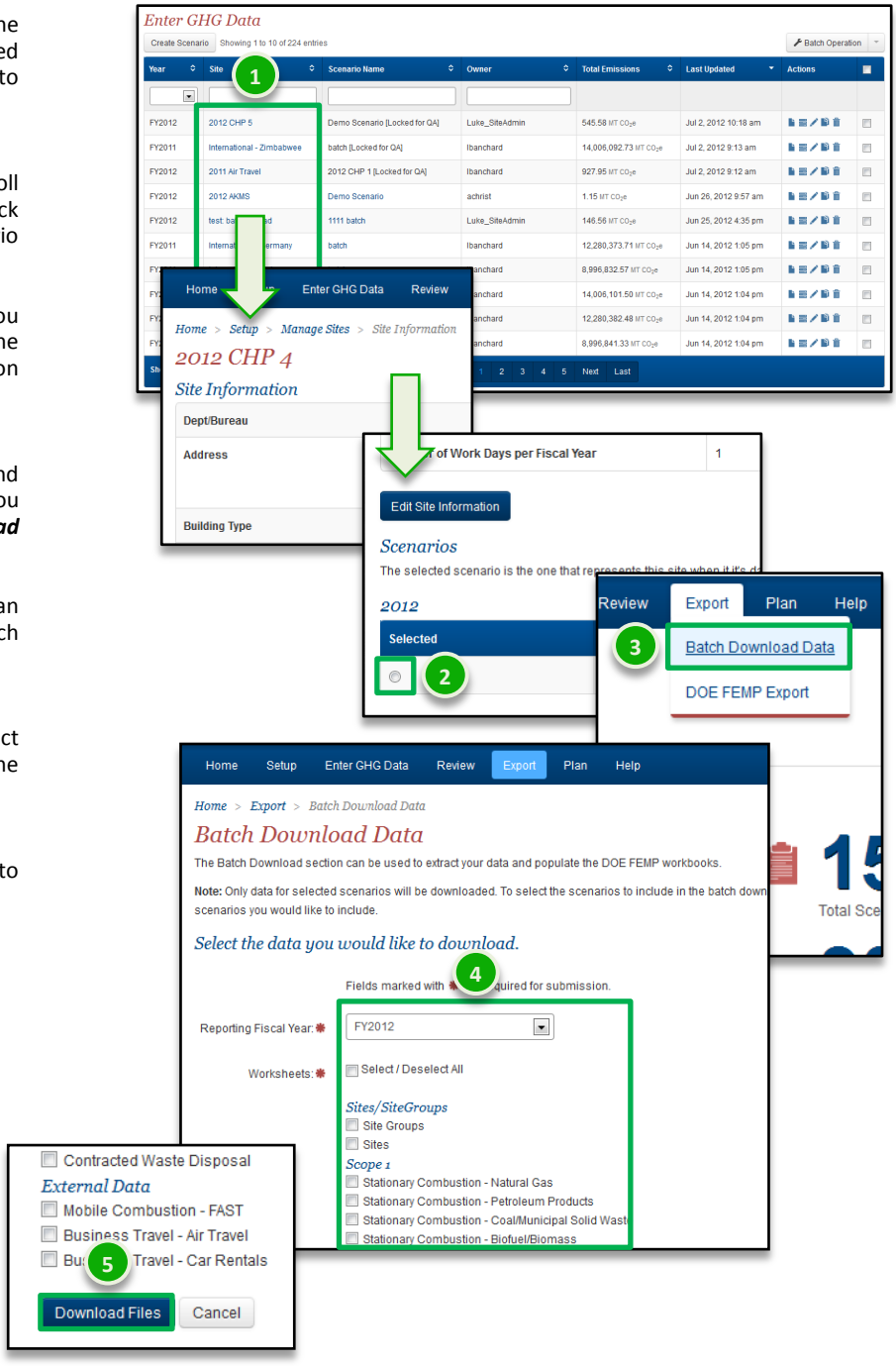
   Note: To get the scenario data you want after the download process, the scenario of interest must be active on the Site Information page first!

3. Return to the **Scenario List** page and click the "Batch Download" link. You will be directed to the ***Batch Download*** page.

   Note: You must be logged in as an administrator to see the Batch Download link.

4. On the ***Batch Download*** page, select the check boxes that match the scenario data you wish to download.

5. Click the **Download Files** button to download your selected files.



DOE FEMP Download

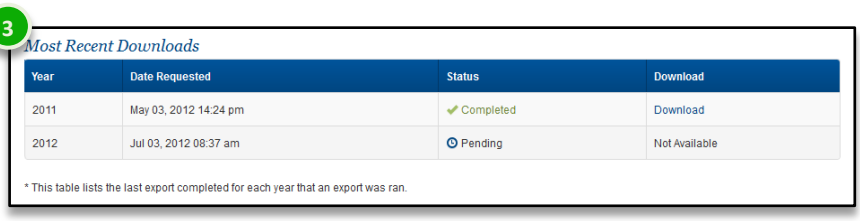
1. Click on the **DOE FEMP Export** hyperlink in the Export section of the navigation bar. This will navigate you to the DOE FEMP Export page.

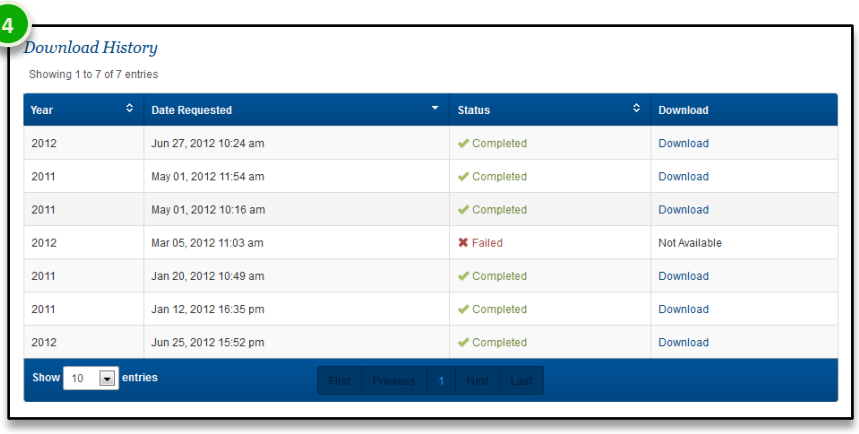
2. Select the desired year for your download and click the **Create** button.

   Note: You will receive a confirmation message after creating your DOE FEMP Download.

3. The page also includes a list of the most recent downloads.

4. Users can view the full DOE FEMP Download history as well.





Plan

Dashboards

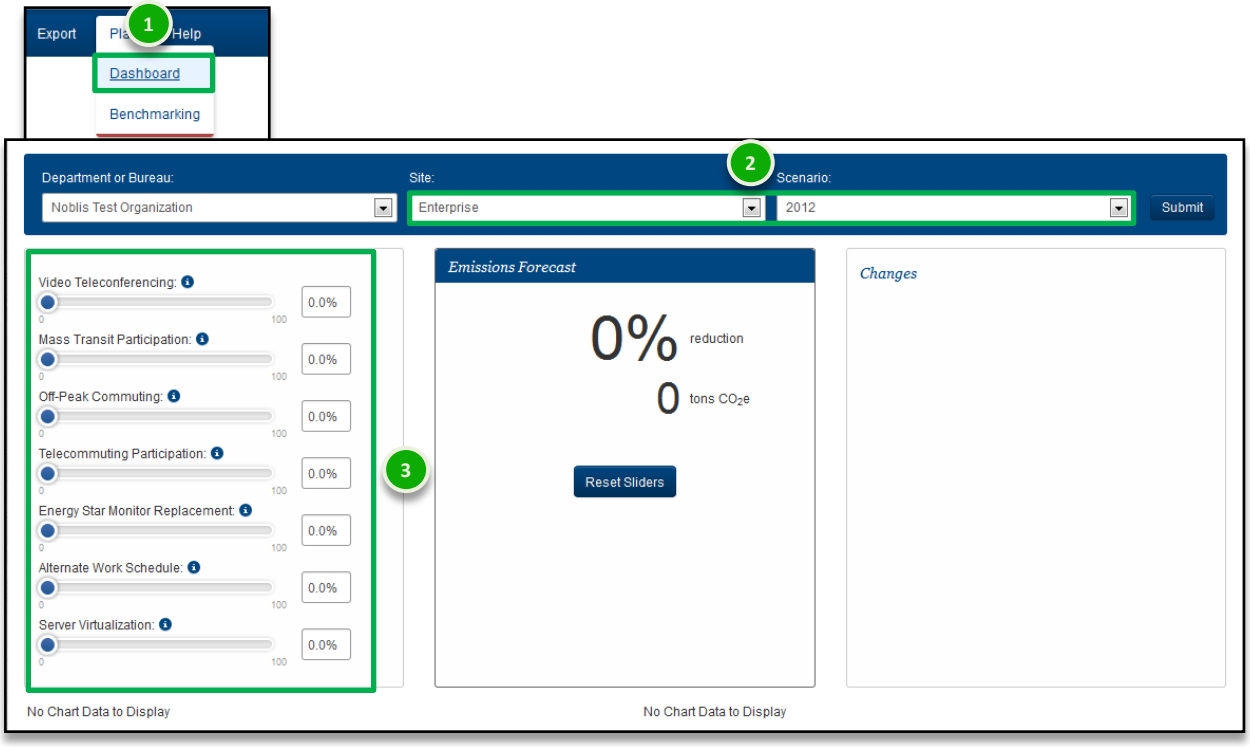
The forecasting sliders under the Dashboard tab allow you to quickly explore how implementing strategies such as video teleconferencing, server virtualization, and alternate work schedules might reduce GHG emissions. To view the assumptions that are used for each dashboard slider calculations, select the "Dashboard Calculations and Assumptions" link near the top-right section of the page.

1. Click the **Dashboard** hyperlink within the "Plan" section of the navigation bar.

2. Click the "Site" and "Scenario" drop-down menus to select the desired data. A SUMMARY of TOTAL emissions for all scenarios during 20XX will be displayed if you select "Enterprise" from the "site" drop-down.

3. Move the slider of interest to gauge the impact of different GHG reduction strategies.

   NOTE: Some sliders may be disabled if required information has not been entered for that scenario in the Analyzer. If a slider does not appear to be active, click on the "Please click here for more information" link.

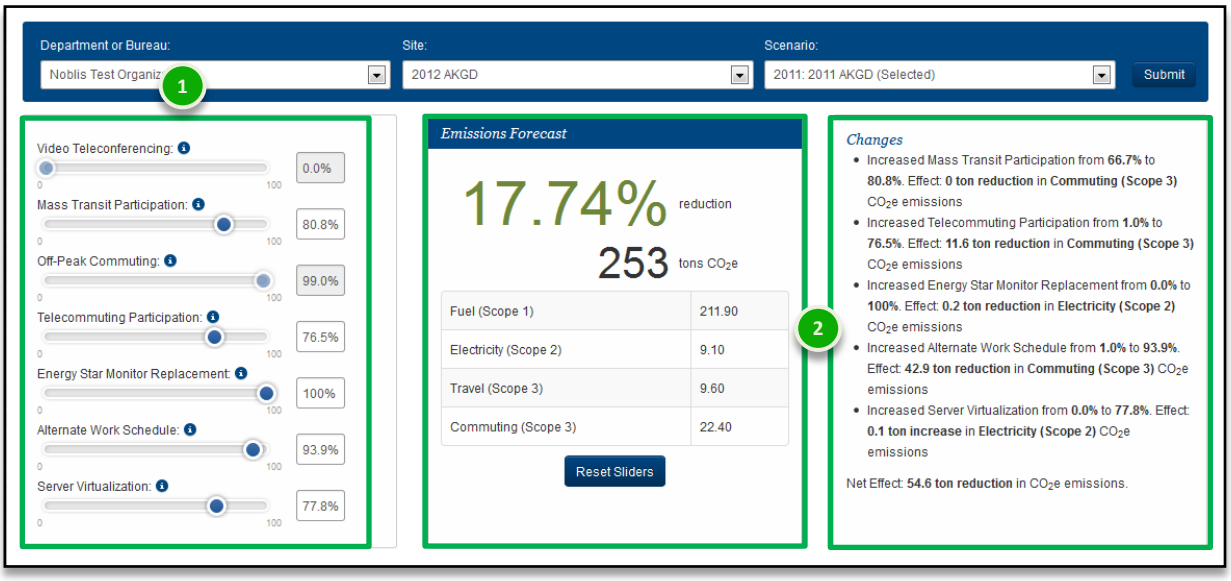


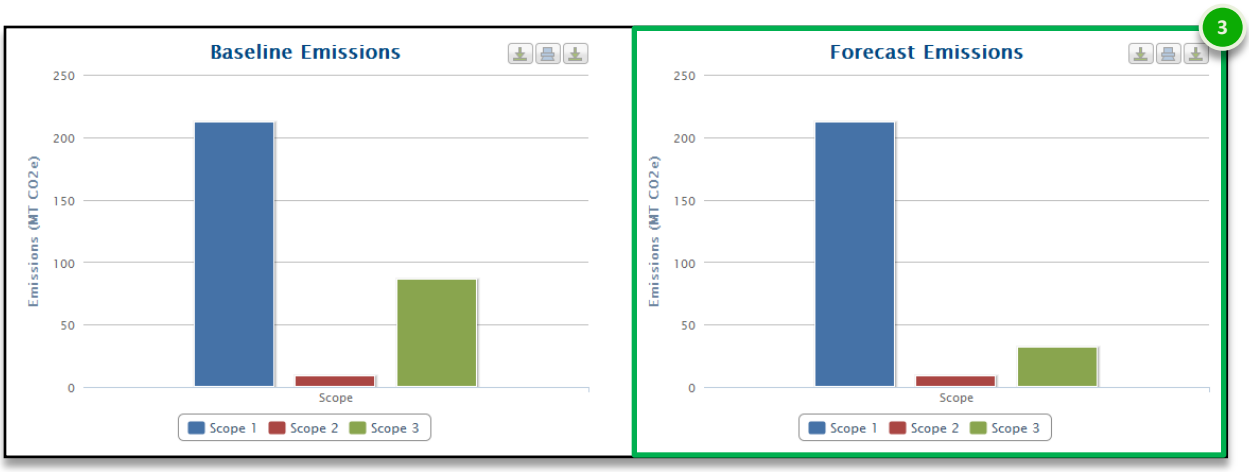
Dashboards (continued)

1. Adjust the sliders to the organizational goals of your Department.

2. The possible emissions reductions and changes for each corresponding slider category with the sliders will be shown after the sliders have been adjusted.

3. The bar charts at the bottom of the page will display a visual representation of the possible reductions after changes have been made to the sliders.

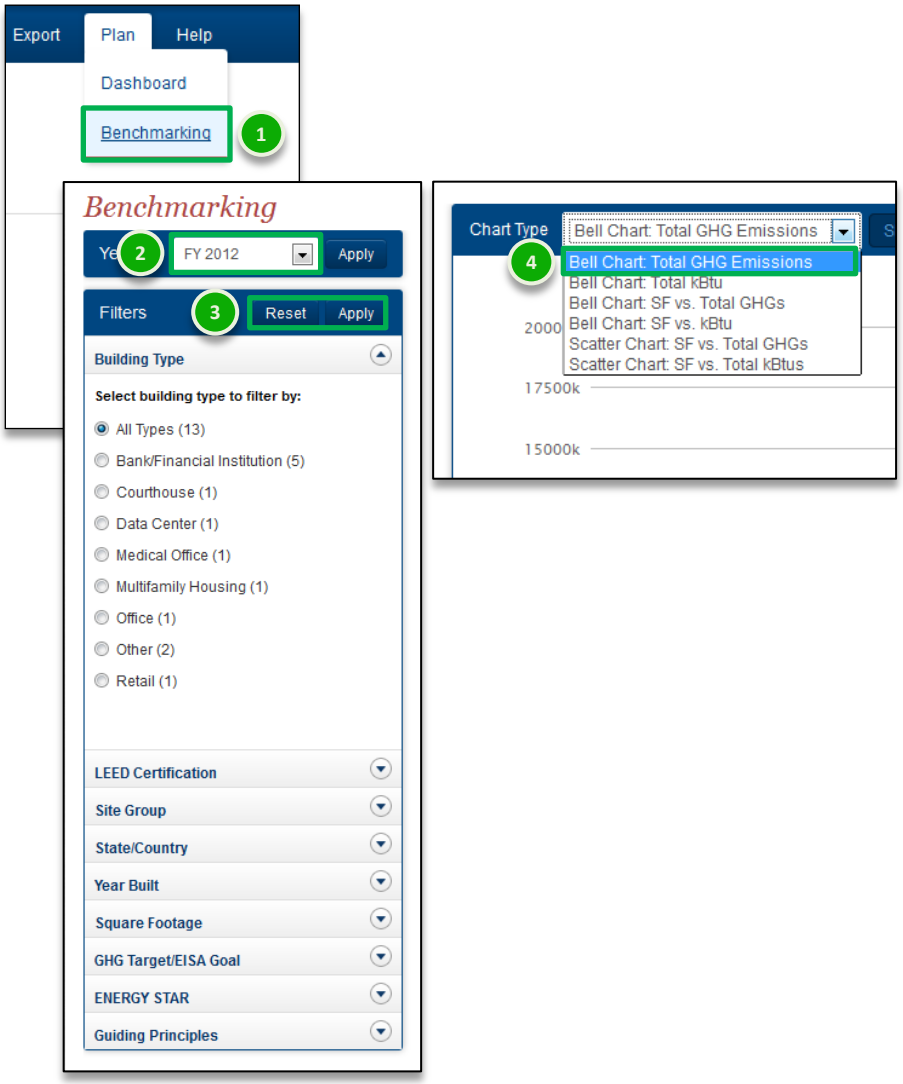




Benchmarking Analysis

The Benchmarking feature allows every site within the organization to be visually compared to all the other sites within the agency's greenhouse gas portfolio. The sites can be filtered by Fiscal Year, Building Type, LEED Certification, Site Group, State/Country, Year Built, Square Footage, GHG & EISA status, and Energy Star & Guiding Principles status.

See the steps below to customize your benchmarking charts:



1. Click the **Benchmarking** hyperlink in the "Plan" section of the navigation bar.

2. Select the desired year for site analysis.

   NOTE: *Some years may not be available for selection if the organization doesn't have sites with any scenarios for the desired year.*

3. The "Apply" button will allow the specified filter to be viewed.

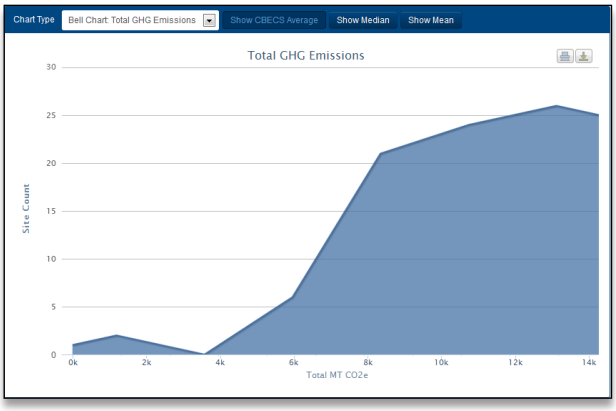
   The "Reset" button will both remove all filters and refresh the chart view.

4. Select the chart type desired from the drop down menu at the top of the chart display section.

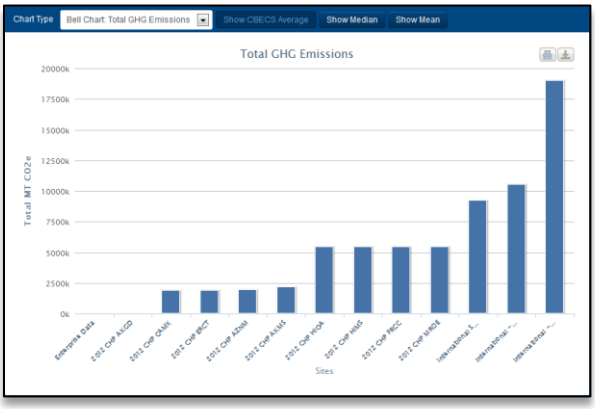
Benchmarking Chart Types

The following charts are available in the Benchmarking Tab of the Carbon Footprint Tool.

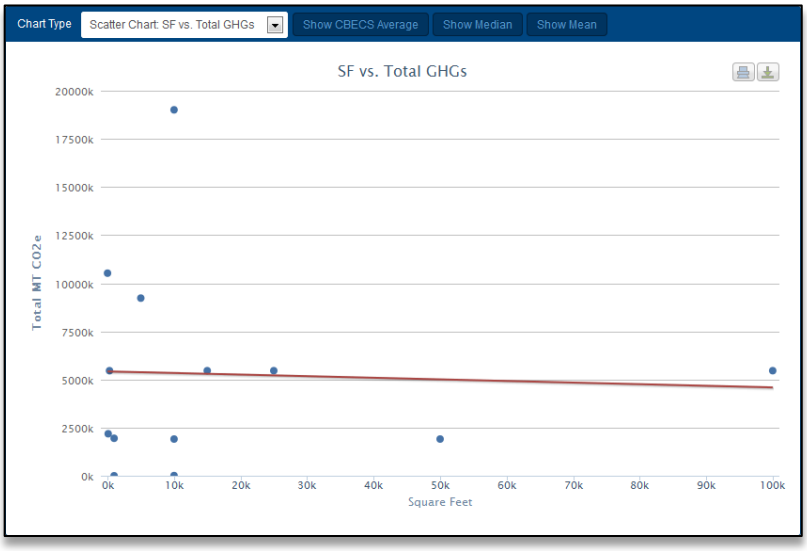
Bell Chart (This is the default view)



Bar Chart (A bar chart will be displayed when 30 sites or fewer are selected)



Scatter Chart



Benchmarking Features

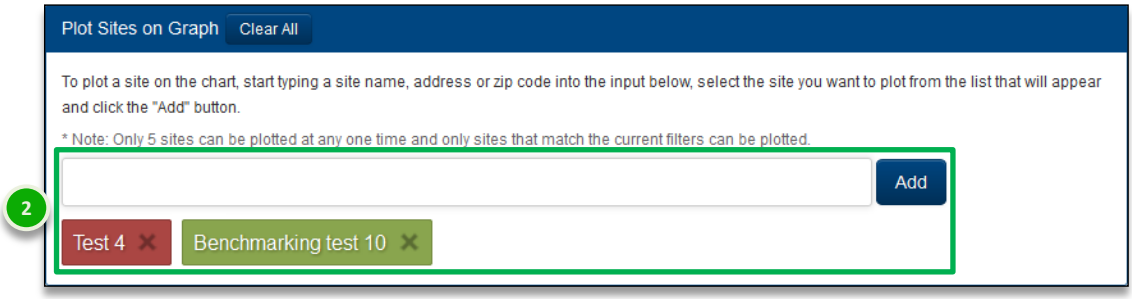
1 **Mean, Median, & CBECS Average Buttons**

These buttons will display the Mean and Median values for your sites as well as the CBECS Average value.

NOTE: The CBECS average button will only be available on the Bell or Bar chart for SF vs kBtu when the following building types are selected: **Data Center, K-12 School, Hospital, Hotel/Motel, Medical Office, Multifamily Housing, Office ,Other, Residence Hall/Dormitory, Retail**

2 **Site Plotting**

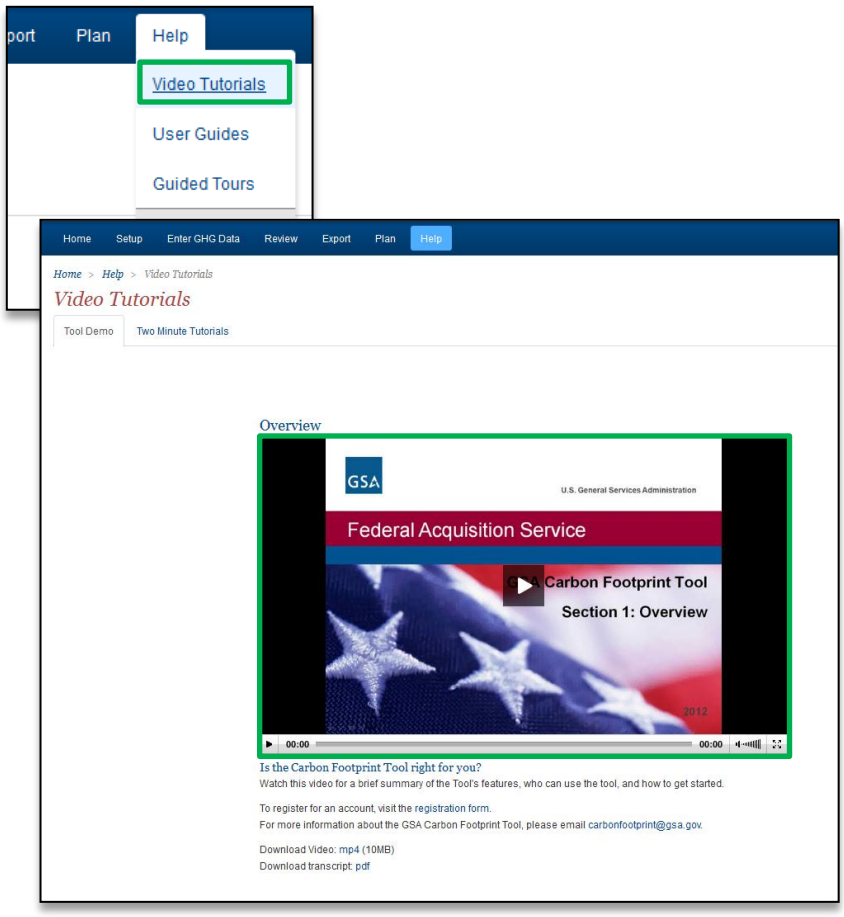
This function allows for specific sites to be displayed on the chart being viewed.



Help

Self-Guided Video Tours

Once you click the **Video Tutorials** hyperlink in the "Help" section on the navigation bar, the self-guided videos appear. The videos provide a high-level overview of the critical steps required to calculate, report and reduce GHG emissions.



Reference Documents

The Carbon Footprint Tool provides several sources beyond this User Guide that you can reference for guidance as you prepare your GHG Inventory. From self-guided video tours to easily accessible reference documents, the support and assistance you need are only a few clicks away.

1. Click the blue **"**User Guides**"** hyperlink in the Help section of the navigation bar. You will be directed to the **User Guides** page.

2. On the **User Guides** page, click the blue "Download" button for the reference of interest.

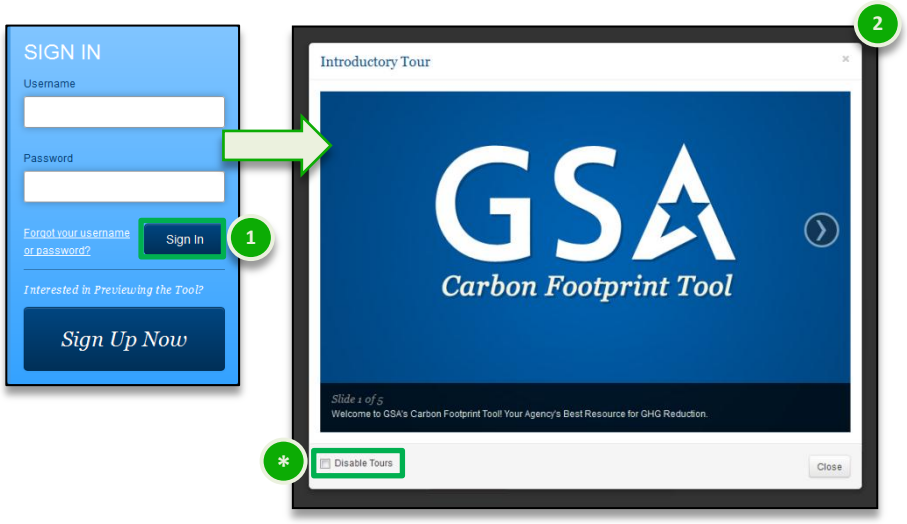
Guided Tours

The Carbon Footprint Tool includes Guided Tours for every section of the Tool. These tours allow new and returning users to view a high-level guide of all the features within each section.

1. Go to the homepage - https://www.carbonfootprint.gsa.gov/ where you will be directed to the ***Sign In*** page.

2. Once logged in, users will be greeted with an introductory Overview tour of the Carbon Footprint Tool.

* ***NOTE:*** *After viewing the tour users will have the option of simply closing the tour, or they can check the "Disable Tours" box, which will keep the tour from popping up each time the user visits the Home page.*



3. Users can find overview tours for each section at the bottom of the Section Menu as well as on the **"Guided Tours"** page.